The JOURNAL of the Michigan State Medical Society
ISSUED MONTHLY UNDER THE DIRECTION OF THE COUNCIL

Vol. XII GRAND RAPIDS, MICHIGAN, APRIL, 1913 No. 4

Original Articles

RECENT PROGRESS IN URETERO-PYELOGRAPHY

W. F. BRAASCH, M.D.
Physician to Mayo Clinic, St. Mary's Hospital
ROCHESTER, MINN.

Ureteropyelography has of late been severely criticized and even condemned on the grounds that it is a painful and dangerous procedure, and furthermore, an unnecessary one.

Ureteropyelography has been employed in the Mayo clinic in the treatment of more than 1,000 patients without fatality or permanent injury. While we have occasionally observed patients in whom colic followed examination by this method, we not infrequently observe similar symptoms from ureteral catheterization alone and we expect more or less colic to follow the use of Kelly's overdistention method.[1]

It has been our experience that severe reaction following pyelography is usually the result of error in technic or lack of care in the selection of cases. The following are some of the technical precautions which should be observed in these cases.

1. Colloidal silver (collargol) crystals should be carefully ground in a mortar when put in solution (10 per cent.) and then filtered, otherwise the undissolved crystals may be deposited on the walls of the pelvis and ureter and act as an irritant.

2. The solution should be carefully warmed before injecting—not boiled—since it coagulates with boiling.

3. The solution should be injected by the gravity method,[2] watching the patient for the slightest evidence of pain. From 2 to 8 c.c. will usually suffice unless symptoms of obstruction have been previously noted.

4. A large ureteral catheter should be used so that the injected solution may drain away easily.

5. The apparatus for the *x*-ray and the injection should be so arranged that there will be no delay after the catheter is inserted.

In selecting cases suitable for pyelography it should be remembered that the method is not to be employed unless the existence or nature of a lesion in the urinary tract cannot be diagnosed in any other way. Unless the procedure is strongly indicated the hypersensitive and neurotic individual should not be examined by means of ureteropyelography. Instances have been reported (Buerger)[3] in which deposits of silver with surrounding foci of evident suppuration were found in the cortex of a kidney which was removed following pyelography. Three similar cases have been observed in the Mayo Clinic, all of which were associated with large hydronephrotic kidneys which did not drain the injected solution. Pyelography is distinctly contra-indicated in such cases and the procedure is not usually necessary in making the diagnosis. It must be remembered moreover, that merely passing a catheter into a distended renal pelvis with a constricted outlet may suffice to cause similar pain and cortical infections. Severe colic resulted in two patients under my observation who had large hydronephrotic kidneys and in whom Kelly's overdistention method was employed to ascertain the capacity of the kidneys. At operation both kidneys showed cortical areas colored with the methylene-blue used in the distending solution. It is quite evident, therefore, that whenever the renal pelvis cannot drain itself following catheter trauma to the etiological ureteral constriction, it may force some of the retained pelvic contents up the dilated tubules into the renal parenchyma.

In recent literature our attention is again called to the subject of ureteral kinks and anomalous positions of the ureter as the cause of pain accompanying movable kidney. Schmidt and Kretschmer[4] have shown how variable may be

1. Kelly: Bull. Johns Hopkins Hosp., June, 1906, p. 175.
2. Baker: Surg., Gyn. and Obst., 1910, x, p. 536. Stanton: Albany Med. Annals, July, 1912. Thomas: Jour. Am. Med. Assn., Jan. 18, 1913, p. 184.
3. Buerger:
4. Schmidt & Kretschmer: Surg. Gyn. and Obst., 1911,

the course of the normal ureter. Fowler[5] claims if a pyelogram is made with the patient first in the dorsal and then in the erect position and the ureter is seen to bend sharply at a fixed point in the pyelogram taken in the erect position, that we have a ureteral kink and a condition which requires operation. In a series of twelve patients who had no abdominal pain whatever and in whom a movable kidney was accidently discovered in routine clinical examination in our clinic, an evident ureteral kink was demonstrable in five instances in the pyelogram taken in the erect position.

Cabot[6] maintains that the relation of the upper ureter, as it leaves the pelvis, is of value in the diagnosis of early hydronephrosis. While it is true that with hydronephrosis we frequently find the ureter leaving the pelvis at unusual angles and then follow a circuitous or tortuous course, nevertheless, in observing a series of normal pelves we often find evident anomalous insertion of the ureter. Whereas at operation we may occasionally find early hydronephrosis, when no pelvic distention could be definitely demonstrated with our present methods of examination, it is difficult to conceive of any long-standing actual ureteral obstruction failing to cause demonstrable dilatation of the pelvis and ureter. In other words, unless the pyelogram shows dilatation of the pelvis and ureter above an evident kink or anomalous insertion, we have no objective indication for operation.

While pyelography has proved to be of value particularly in the diagnosis of small, early hydronephrosis[7] (20 to 30 c.c.); yet, it has its limitations. The normal renopelvic outline varies to such an extent that it is difficult to fix the normal limits. The first evidence of previous mechanical retention in the renal pelvis will be shown by the broadening of the entire calyx and flattening of its terminal irregularities. Not infrequently, however, the normal pelvis will show evident broadening of several calices and an exceptionally large pelvic outline which may be difficult to differentiate from the changes of early hydronephrosis. To be of practical value, therefore, the pelvic deformity must be quite marked. Unless the pelvis is fully distended with the injected solution, moderate pelvic distention will be overlooked. This often involves technical difficulties. When a small hydronephrosis is suspected it is best to use as large a catheter as possible to prevent the return flow of the injected material.

It may be difficult to demonstrate ureteral distention in the radiogram, following the injection. Unless the ureter is fully distended the dilatation may not be apparent and the partially collapsed ureter may appear to be of normal size. When evidence of possible ureteral distention is obtained by means of the catheter, namely, residual urine and obstruction, better outlines may often be obtained by rapidly injecting the colloidal silver with a syringe rather than by the gravity method. Ureteral dilatation resulting from infection and without constriction may be difficult to show unless a catheter be used large enough to at least partially prevent the return flow of the injected medium. The outline of the normal ureter may occasionally appear abnormally large because of the considerable amount of return flow, but the apparent distention can usually be differentiated from a slight abnormal distention since the broadening caused by the return flow is evident only in areas giving an irregular outline to the ureter. The possibility of demonstrating distention of the ureter by means of permitting the colloidal silver solution to run into the ureter from the injected bladder with the patient in the Trendelenburg position has been advocated by various observers,[8] but has not proved to be of practical value, except in a few cases in which the ureteral dilatation involved the meatus. The meatus is not as a rule found dilated with ureteral dilatation except with ascending infections accompanied by severe cystitis or with extreme bladder retention of long standing.

The use of gas as an injected medium instead of colloidal silver has been advanced by different observers. Cole[9] advocated the injection of air and more recently Lichtenberg[10] suggested the use of oxygen. Theoretically, either air or oxygen should be admirable substitutes and would obviate the disagreeable features of the colloidal silver. Simplicity of technic in making the injection, absence of after-pain, rapid drainage and the advantages gained in localizing the renal stone are all arguments in favor of gas. In our experience, however, the use of gas with the present technic or method of application has not been practical. The first obstacle encountered, in spite of careful preparation, is the difficulty of eliminating gas in the bowel. The confusion of the shadow in the renal pelvis with the shadow

5. Fowler: Surg., Gyn. and Obst., February, 1912, pp. 137-143.
6. Cabot: Jour Am. Med. Assn., Jan. 4, 1913, p. 16-20.
7. Braasch: Jour. Am. Med. Assn., Dec. 16, 1911, pp. 1986-7; Cabot: Ibid., Jan. 4, 1913, pp. 16-20.
8. Uhle: Tr. Philadelphia Acad. Surg., 1911, xviii, 19. xiii, 287-292.
9. Cole: New York Med. Jour., 1910, xcii, 705-708.
10. Lichtenberg: München. med. Wchnschr., June 20, 1911, pp. 1341-2.

caused by the gas in the adjoining bowel renders interpretation uncertain. Furthermore, in the majority of cases, it is difficult to keep the pelvis fully distended while the radiogram is being made. The consequent lack of detail in the air distended outline is a distinct disadvantage. It is usually impossible to distend the ureter with gas and at best the procedure is uncertain.

The clinician who has had considerable experience with cystoscopy and with the interpretation of shadows in radiograms of the urinary tract, and who has an opportunity to see his diagnoses checked up at the operating-table, realizes that these diagnostic methods will frequently mislead the operator. Naturally, the more experienced the clinician the less will be the percentage of errors. But even with wide experience the two diagnostic methods when used independently, often fail in the diagnosis of hydronephrosis, in the identification and extent of inflammatory changes in the kidney and ureter, differentiation of extrarenal and extra-ureteral shadows, localization of renal shadows, identification of renal tumors, identification and localization of ureteral obstruction, hydro-ureter and the diagnosis of congenital anomalies. It is in the above conditions that ureteropyelography alone can give us accurate data as to the nature and extent of the lesion. Whether or not this will be regarded as necessary depends on the degree of accuracy desired in the diagnosis.

THE HEAT FACTOR IN THE ALIMENTARY DISTURBANCES OF INFANCY

JOHN H. CROSBY, A.B., M.D.
PLAINWELL, MICH.

The summer diarrheas of infancy have long been the bane of medical men and the source of much anxiety and sorrow to parents and friends. A great deal of time and much painstaking study has been expended in the attempt to determine the cause and thereby the means of preventing the enormous death-rate attributable to this disease. Every possible factor has been brought out and considered the chief cause, only to be finally put among the contributing causes, and to-day we are still working toward the goal.

In a book by Routh of London, published in 1860, summer diarrhea is stated to be of zymotic origin, and that it is contagious, as evidenced by the fact that it is more prevalent in cities where there is a greater congestion of population. Later, the bacterial theory became generally accepted. More recently it is being regarded as a disease of metabolism concerning especially certain of the food elements.

The bacteriological theory seems reasonable, inasmuch as breast-fed children are less susceptible to summer diarrhea, and as the high temperatures are favorable to the growth and development of bacteria in the milk. This theory has led to the establishment of pure milk stations in every large city where even the poor can get clean milk for the babies. It is noteworthy, however, that the simple furnishing of pure milk has not been the means of reducing, very materially, the mortality among the infants.

In a paper by Dr. Pisek, before the Pediatric Section of the New York Academy of Medicine, the results of the work of the milk stations in New York City are given for the summer of 1911. There were seventy-nine milk stations, and 74,000 quarts of milk were dispensed weekly, showing the magnitude of the work. Dr. Pisek states, that "the idea of the function of the milk station is changing; that it is no longer primarily a milk distributing agency, but a center for the education of the mothers in the care of the children." The visiting nurses go into the homes and teach the mothers how to modify the milk at home; how to keep the milk in simple home-made refrigerators; how to conserve the breast feeding, thus saving the breast to many babies who otherwise would be thrown onto artificial food. They also teach them how to recognize the danger signals of summer diarrhea and show them the necessity of immediate action. By these means the death-rate was diminished, 17.7 per thousand, over the summer of 1910. So it was found that there must be more done than to furnish pure milk in order to accomplish greater benefits and results.

About two years ago, I was impressed by an article by Finklestein, in which he stated, "That summer diarrhea is induced by overheating the babies, and that deaths from summer diarrhea should in reality be reported as deaths from heat stroke." We have seen babies suffering from impaired digestions and with diarrhea caused by having been overheated in bed by hot-water bottles. Since reading this article I have observed that the severest and most fatal cases have been in small, low, poorly ventilated houses, in the outskirts of the village where shade trees are absent and there is no water available for lawn sprinkling.

In the cities, the mortality is greatest in the congested slum districts where there is no green grass or shade, but only the pavements, brick and stone buildings radiating heat and retaining it long after the heat wave has passed.

Within a year or so, several articles have appeared from the pen of Hans Rietschel on this subject. One of these articles was accompanied by a complete bibliography covering all the phases of the disease.

Rietschel finds that previous to 1870 little was known in Germany of cholera infantum except as reports came of it from America and that it was known as the "American Disease." After that time, however, the population began accumulating in the cities and the children began to suffer from the summer diarrhea. He finds, also, that it not only is most common in the city, but also that it is most severe in the hottest parts of the cities, and in the hottest houses and the hottest rooms.

For instance, the statistics of the deaths from this disease in various cities were analyzed. Dresden lies along the river Elbe and in the river districts the streets are low, while back from the river they are fairly high. In seven streets in the low districts 40 per cent. of the infants living on those streets died; in sixteen, 30 per cent.; in fifty, 20 per cent.; while in 223 high streets there were no deaths.

In Halle, Liefman found that there were 577 deaths on thirty-five streets, while on 204 streets all the rest of the infant deaths, to the number of 619, were scattered.

Another series of statistics compiled by Rietschel, covering a period of five years in a large number of dwellings in Berlin, are of interest in this connection. He finds that the heat in the houses is several degrees higher than that of the outside air and that the air is stagnant and the temperature does not fall at night to the same degree as the outside air. He contends that the high degrees of heat lower the vitality of the infant to such an extent that its toleration for the food elements is greatly decreased, especially among delicate children, and that there are naturally greater numbers of such delicate children and children with digestive disturbances among the class of people inhabiting these dwellings—consequently the death-rate is higher. It may be contended that these conditions also favor bacterial decomposition of milk and that this may be the factor of greatest importance, but Rietschel argues that lower night temperatures decrease the death-rate even though the children continue to take the bad milk.

Meinert analyzed 580 deaths from summer diarrhea with reference to the floors on which the children lived. He found that 3.98 per cent. lived in the basement, 12.78 per cent. lived on the ground floor, 10.78 per cent. in the first story, 9.13 per cent. in the second story, 8.18 per cent. in the third story, 9.18 per cent. in the fourth story and 11.27 per cent. in the fifth story.

He explains this as follows: The air in the basement, while foul and unhealthy, is cool. On the ground floor it is hot and the circulation of air is less. The gradually decreasing percentages in the ascending stories is due to the better circulation of air, while in the fifth story, being directly under the roof on which the hot sun beats all day, it is again high, and this excessive heat more than counterbalances the better circulation of air.

If the excessive heat rather than bacterial contamination is the cause of the diarrheal diseases, why are artificially-fed infants more susceptible than breast-fed. Rietschel explains it as follows: The breast milk is naturally adapted to the digestive functions of the child, while any other form of food is an unnatural food and the digestion of the child is more easily disturbed by its use. He subjected a number of children to high temperatures during which time the milk was above reproach from a bacteriological standpoint. He found that those babies with impaired digestions reacted with diarrhea while the healthy ones did not.

Again, he fed a considerable number of children on milk which had been left standing in open vessels, at room temperature, for a certain time. Some of the children were healthy and some had alimentary disorders. He found that most of the healthy ones were unaffected while those suffering from intestinal diseases did not react in any case in a manner typical of summer diarrhea, although some were aggravated in a degree. However, he does not advocate feeding any but the best milk obtainable.

In the Kinderasyl in Berlin, practically the only cases of summer diarrhea occurring in the institution are found in a low, illy-ventilated, frame building situated in the angle of the L as I have stated in a previous paper.* Inasmuch as all the infants in the institution receive food from a common source and it is all sterilized, it seems reasonable to suppose that the cause lies outside the food supply, and as heat and air in the frame building are the only factors at variance with the conditions in the remainder of the institution the diarrhea mentioned may well be ascribed to the heat factor.

The relation between deaths from summer diarrhea and the outside temperature is a direct one. Statistics for the summer of 1908, quoted by Rietschel, show a direct increase in the number of deaths, week by week, as the summer tempera-

* Infant-Feeding, Physician and Surgeon, June, 1910.

ture increased, up to the last week in August. During this week the day temperature averaged the highest of any week of the summer, namely, 86½ degrees. The night temperature, however, was lower than the average for the summer—60 degrees. This gave the infants a chance to cool off, thus offsetting the effects of the excessive day temperatures; there were fifty less deaths in the city than in each of the previous weeks, and 105 less than in the third week previous.

A chart prepared by Finklestein shows graphically this relationship. The sudden rises of temperature are accompanied by increases in the number of deaths; he explains that, by connecting the lower points of the curves, we get the gradual increase of deaths, in which the illnesses may have been prolonged over several days or weeks, while the upper angles represent the acute cases.

The diarrheas begin to increase within a few hours from the time of the excessive heat, and, according to the figures from which Finklestein's chart is made, the mortality begins to increase very suddenly.

Between eighty and ninety degrees F. the number of deaths markedly increase. It scarcely seems probable that the ten degrees rise of temperature would increase the toxicity of the milk sufficiently to alone cause the increase in the number of deaths. Also, we find that the prolongation of the heat wave causes an increase in the mortality for many of the infants with subacute or chronic diarrheas succumb to the continued heat, who, if there were a break, would begin to improve. Some observers have noted that the mortality from the diarrheas is greater when there is no wind and probably this is a partial explanation for the higher mortality in the city than in the country; also, of course, in the country there is more opportunity for the reduction of the temperature at night.

In this connection the pertinent question has been asked, if given the choice between treating children with summer diarrhea in a city tenement, at home with a germ-free milk, and in the country, or at the seashore with milk subjected to home conditions which would most physicians prefer?

There are two forms of heat effects. One is "heatstroke," and the other "heat stasis." All of us are familiar with heatstroke, which is the same condition as found in the adult, and undoubtedly is the direct cause of many infant deaths. Bartlett explains that heat stasis is a condition admitting of no definite proof pathologically, but that high temperatures cause a distinct harm to the vitality of the infant. Von Pirquet shows some graphic representations of this which indicate the immediate and extreme lowering of the limit of tolerance for food when the child is subjected to heat. In another chart he shows the variations in the tolerance limits for various modifications of cow's milk and for woman's milk.

Infants subjected to high temperatures suffer a rise in body temperature, which is explained by a disturbance in the heat loss of the body, i. e., there is a heat stasis. When this is prolonged the vitality is lowered and the cells are required to functionate under abnormal conditions and some suppose that this causes products to be formed which are injurious to the child. Ludwig Meyer suggests that there is a retention of salts and that the fever may be a "salt fever."

Rietschel concludes that the problem of summer diarrhea is essentially a housing problem, and that in the future we must look more to the environment of the child than to its food in solving it. It is not a simple matter, but when its importance is more generally recognized, the sooner will it be possible to convince municipalities of the necessity of providing more playgrounds and parks where the children may get good air and cool shade. And, when the physicians recognize the importance of this heat factor the sooner will the mothers be educated to the necessity of keeping the babies cool by frequent spongings, of good ventilation and getting the babies away from homes and into the parks, or into the country as much as possible during the hot weather.

Certainly we cannot afford to relax our efforts to procure pure milk for the babies, nor be negligent in the matter of the constituents of the diet, but if the direct effects of heat are as harmful as some of recent observers believe we must be encouraged, for the future offers much of promise in the field of the reduction of the summer mortality of infants.

INTRATRACHEAL INSUFFLATION: PRINCIPLES AND USES*

J. J. FABIAN, M.D.
GRAND RAPIDS, MICH.

I will endeavor in this paper to briefly cover the subject of intratracheal insufflation; touching on its history and practical application, with a few experimental observations in the use of this method following gas poisoning and drowning.

The history of this subject is not new. As far

* Read before the Kent County Medical Society, Jan. 22, 1913.

back as the sixteenth century, Andreas Vesalius, the father of modern medicine, proved that he could keep an animal alive, after opening the chest, by blowing through a tube introduced into the trachea.

In the latter part of the seventeenth century, Robert Hook demonstrated that respiratory movements were for the purpose of bringing about a supply of fresh air to the lungs.

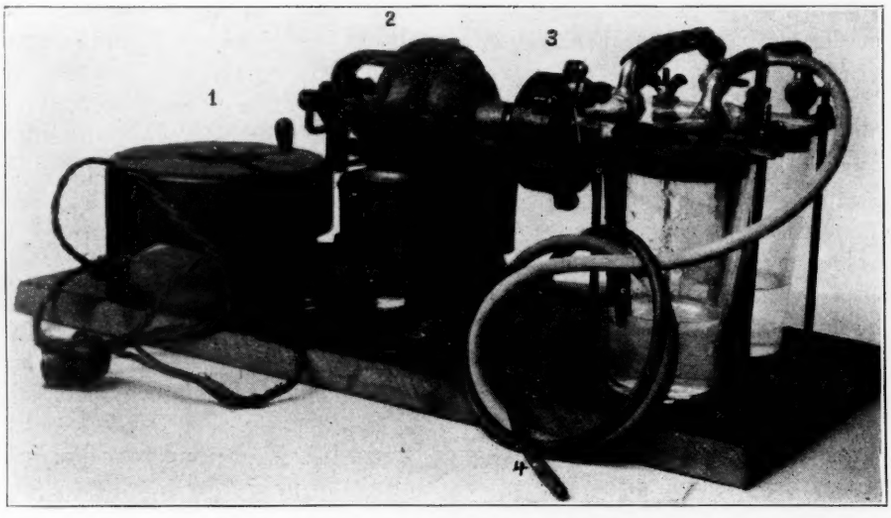
During the eighteenth century, the use of a bellows connected with a tube, and introduced into the throat, was advocated in cases of drowning and for artificial respiration. This procedure was recommended by the Royal Humane Society; they recognized the danger of overdistention as well as blowing air into the stomach instead of the lungs as a result of some obstruction in the air passages, in which event they advised tracheotomy. Shortly after this time DeSault, through accident, discovered that the larynx would tolerate a tube introduced within its lumen for an extended period, and as a result of this discovery devised the technic of introducing a catheter into the trachea for relieving stricture of the larynx.

The bellows and laryngeal tube were then in general use for all artificial respiration until 1827 when LeRoy showed the dangers of overdistention of the lungs by use of bellows and advocated a method of artificial respiration by alternating compression of chest and abdomen, after which the use of the bellows and tracheal tube was discontinued.

In 1885, O'Dwyer of New York devised a tube and introducer which at once became popular, and is to-day accepted in its various modifications for use in tracheal and pharyngeal obstructions as in diphtheria. Two years later, Fell of Albany reported a case of severe opium poisoning which he saved by means of bellows and tracheal tube.

To Matas belongs much credit for original work along this line. He devised a very ingenious apparatus utilizing Fell's methods and O'Dwyer's tube with slight modification by means of which he was able to keep the patient anesthetized and perform intrathoracic operations.

For the past fifteen years, Kuhn of Germany has been using a tube introduced into the larynx, and more recently, 1908, the use of a two-way tube—two tubes within one large tube, one for entrance of air, and the other for exit of air; this has proved quite efficient for slight intrathoracic work, excepting that the air did not get to the deeper alveoli because of the space between the end of the tube and the tracheal bifurcation. Meltzer and Auer recognized the error in Kuhn's technic, and by bringing a single smaller tube to the bifurcation of the trachea they overcame all the difficulties encountered in all other methods; hence to them belongs the credit for demonstrating the safety of intrathoracic surgery as well as artificial respiration by means of their intratracheal insufflation technic.



THE AUTHOR'S APPARATUS FOR INTRATRACHEAL INSUFFLATION

(1) Rheostat. (2) 1/10 H. P. motor. (3) Air compressor. (4) Intratracheal tube. Measures 8x20x8 inches. Weight 25 pounds.

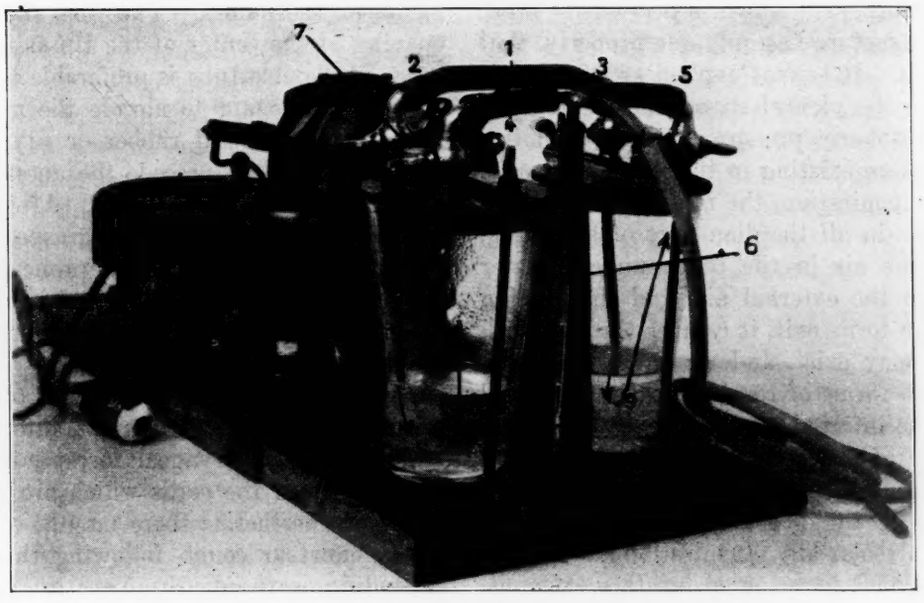
In 1904, Sauerbruch of Mickulitz' clinic gave this subject considerable impetus by describing his now famous negative pressure air chamber. This consisted of an air-tight cabinet sufficiently large for patient and operator; the air in the cabinet is kept under constant negative pressure and the head of the patient emerged from this cabinet, through an opening to the outside, this

opening is protected by a rubber collar fitting snugly around the neck. The negative pressure in the cabinet prevents collapse of the lungs when the chest is opened. The principle of this mechanism is ideal, the patient breathes naturally, the difference in pressure of air on the outside and that within the cabinet is not sufficient to embarrass expiration.

The studies of Brauer and Willy Meyer of New York have shown that the mechanism of Sauerbruch's negative pressure cabinet may be reversed, namely, positive pressure within a chamber into which the head of the patient is placed, the operator and table remaining on the outside. The effect of this is in no way different than the much more complicated Sauerbruch chamber.

its outcome, Elsberg utilized the intratracheal insufflation in a case at Mount Sinai Hospital in which the patient, suffering from myasthenia gravis, was pronounced dead. By this method he kept the patient alive for five hours without an apparent voluntary respiratory effort.

Encouraged by this result, he resolved to use his insufflation apparatus on the first suitable case that presented itself, which was on Feb. 20, 1910: a case of abscess of the lung came for operation, which was performed by Dr. Lilienthal, the anesthetic being given by Elsberg under ether intratracheal insufflation. A report of this was made by Lilienthal and Elsberg in the *Annals of Surgery*. The operation lasted forty-five minutes; the lung was well exposed, the anesthetic being taken without strain; pulse and color remained good throughout the operation, and the patient came out from the anesthetic in four minutes after it was discontinued. This method of anesthesia is now recognized as an every-day procedure at this institution, it having been given in over 500 operations; it is used at Roosevelt Hospital by Dr. Peck, as well as in the Boston City Hospital and in several other hospitals. Those who were so strongly opposed to this artificial respiration apparatus now look on it with considerable favor.



THE AUTHOR'S APPARATUS FOR INTRATRACHEAL INSUFFLATION

(1) Air from air compressor. (2) Air to hot water chamber. (3) Air to ether. (4) Air from hot water chamber. (5) Air from ether chamber. (6) Hg manometer. (7) Opening to chamber; rubber stopper. (8) Hot water. (9) Ether.

The greatest opponent to the Meltzer-Auer method was Willy Meyer, who could see no good in this apparatus, claiming that while it appeared very simple it was in reality more complicated than his positive and differential pressure cabinets, and though it worked on the dog it would not necessarily do so on the human subject.

It would seem that, following such criticism from so eminent an authority, the method advocated by Meltzer would never have been utilized in the human being, but the numerous experiments on animals and other observations in the physiological laboratory more than convinced these workers that the method was feasible; and accordingly, with considerable trepidation as to

In order to appreciate the principles and technic as advocated by Meltzer and Auer it is necessary to thoroughly understand the physiology of normal respiration.

PHYSIOLOGY OF RESPIRATION

By the alternate expansion and contraction of the chest we have inspiration and expiration. To inspire air into the lungs it is necessary to increase the capacity of the thorax, this, as you know, is accomplished by the muscles of the chest and diaphragm, which increase all the diameters of the chest cavity. The air or pressure within the pleural space being negative and the lung elastic, it must necessarily follow the movements of the chest wall. There being only one opening, the nasopharynx, air rushes in. Should there be produced another artificial opening in the chest wall, air will rush in through such an opening as well as through the trachea. This air must necessarily occupy the space formerly occupied by lung tissue, thus producing pneumothorax.

If both sides of the chest are opened, we have double pneumothorax; which is necessarily fatal, as the lung structure has only one property, that of contraction. It cannot expand as long as air can rush into the pleural space and equalize the positive atmospheric pressure with the relative negative pressure existing in this space normally.

Following inspiration, the muscles relax, causing a decrease in all the diameters of the chest; this brings the air in the lungs under greater pressure than the external air, and there being no obstruction to its exit, it escapes through such openings as may exist, and we have expiration. There are two forms of respiration: internal and external. The internal respiration has to do with the exchange of gases between alveolar air and blood-vessels, and the external attends to the maintenance of the proper composition of the gases in the alveolar air. Inspiration and expiration are designed to bring about this exchange of gases in the alveoli and between the alveoli of the lung and capillaries.

Since, then, the only function of the respiratory movements is to bring about this exchange of gases, any principle that in effect will bring about the same exchange of gases will answer the purpose of respiratory movements, which as I have demonstrated, may be entirely suspended for some time.

Haldane of England has shown that respiratory movements depend on the CO_2 content of the blood, and an excessive number of respirations will reduce the CO_2 content, producing a condition known as apnea, in which respirations are less frequent. This, if allowed to continue, will produce symptoms similar to shock: when the CO_2 reaccumulates, then normal respirations recur. The opposite condition to apnea is anoxemia, in which death results from insufficient oxygen.

After a normal expiration about 3,000 c.c. of air remain in the alveoli, 1,500 c.c. reserve, and 1,500 c.c. residual. About 500 c.c. of air taken in during inspiration is tidal air, one-third of this remains in the larynx, trachea and bronchi and does not come in contact with the alveoli. As the shock or jarring of respiratory movements aids in the diffusion of gases, it becomes necessary to allow collapse of the lungs several times a minute to rid the deeper alveoli of accumulated CO_2.

TECHNIC

A rubber tube is selected—30 cm. long, varying in size from 22 F. to 24 F.—depending on the size of trachea; the tube to be one-half the diameter of the trachea; however, absolute accuracy in this is not possible nor is it necessary. I have found for routine a 22 F. suitable for experiments on most dogs. The tube should have an opening at the center of the tip as in a stomach tube. A flexible tube is preferable to a stiff one, as it is not so apt to abrade the mucous membrane as will a hard rubber or silk woven tube.

Morphin should precede the anesthetic, which is started in the ordinary way. After the patient is well under, the tongue is grasped and pulled forward, the head held in the prone position, and the left index finger introduced behind the epiglottis, which is then pushed anteriorly toward the tongue.

By means of a direct laryngoscope or throat mirror, the glottis is brought into view. The tube, held by a laryngeal forceps, is now introduced between the cords which are relaxed as a result of anesthesia: there may be a slight expiratory effort or cough following this maneuver, depending on the depth of anesthesia. It is not necessary to cocainize the parts, as at first advised, preliminary to the introduction of the tube.

The tube is gently forced down the trachea until a slight resistance is felt, showing that it has reached the bifurcation of the trachea; it is then withdrawn for about 2 cm. The distance from the upper incisors to the bifurcation of the trachea is from 23 to 26 cm.; the glottis is midway between these points, and the tube may be marked accordingly. The tube is now attached to the mouth-gag which holds it in place and prevents it from slipping.

If the tube is within the trachea, air will be felt coming through it during expiration. It is much easier to place the tube into the esophagus instead of the trachea and accidently inflate the stomach; this can be overcome by introducing a stomach tube after tracheal intubation and allowing the air to escape.

The tube is then attached to whatever air force may be used—bellows, or air from tank under pressure or air compressor. Meltzer, in his experiments, used a bellows to which he connected a Y-tube, to one end of which he attached a mercury manometer, and to the other, the tracheal tube, and gradually began insufflation.

The pressure should begin slowly and gradually be raised to 15 mm. mercury. The various designs of apparatus on the market, of which I consider the Elsberg and the Janeway type the best, allow the air to pass through water properly heated and may be mixed with ether vapor either lightly or saturated.

For intrathoracic anesthesia, ether should be the anesthetic used. Nitrous oxid gas as an anesthetic, while ideal, used in the ordinary way, cannot be sufficiently controlled with the required force to enable its use in this form of anesthesia. Oxygen can be used in connection with any apparatus and the amount given definitely controlled by means of a separate bottle through which it may bubble, and the pressure be recorded on the manometer. The use of chloroform should not be advocated in this method, although I have used it in most of my experiments.

INDICATIONS

Elsberg has had uniformly good results with intratracheal insufflation anesthesia in all his cases in different operations, and favors this method for all operations about the head and neck, as it enables the anesthetist to be placed at some distance from the operator, and thus he is not so apt to infect the field of operation.

This method is ideal in all surgery of the superior and inferior maxillae, surgery of the throat, tongue, laryngectomies, or where the buccal cavity has to be widely opened, as it prevents the inspiration of blood and mucus into the trachea; this has been positively demonstrated. It is practically impossible to inhale fluids into the trachea and bronchi during insufflation, as the current of air coming up around the tube prevents the material from being inspired. One of the remarkable features of this anesthesia is that it does away with the mucous rattle in the throat so commonly observed in the usual anesthesia.

Not a single case of post-operative pneumonia has Elsberg had with this method, nor has he noticed any impairment in function of the vocal cords. This method should be used in all intrathoracic work and is ideal in cases of obstruction of the bowel, thus avoiding the accident of inspiring fecal or other vomitus. In giving this anesthetic, practically no vomiting has been observed either during or following it. It is practically impossible to give too much ether by this method, as shown in Meltzer's experiments. Where it is necessary to keep the patient anesthetized while lying flat on the abdomen, as in laminectomy, this method can be utilized.

To enumerate the experiments carried on by various investigators on animals, under intratracheal anesthesia, would consume more time than can be devoted to this paper.

Carrel claims that opening the heart and introducing a finger to ascertain the condition of the valves does not necessarily interfere with the health of the animal. He has been able to suture longitudinally, and transversely, and resect portions of the descending thoracic aorta, replacing the section with a piece of jugular vein preserved in cold storage. Dogs have been kept under ether intratracheal anesthesia for eight hours; and have been kept alive in cases of strychnia poisoning involving the muscles of respiration.

Cotton and Boothby have kept a cat alive for sixteen hours with the pleural cavities wide open, with recovery in fifteen minutes following the discontinuation of the anesthetic. They used nitrous oxid-oxygen anesthesia by means of a specially devised apparatus.

EXPERIMENTS

My own experiments and observations have been confined to the use of ether, chloroform, nitrous oxid and oxygen as the anesthetic agent insufflated into the trachea; the results of the use of these, together with the operations performed, coincide with the results obtained by others who have had considerable more experimental material. No dog succumbed to the anesthetic; occasionally the heart would be seen to slow up, or become feeble, in which event slight increase or decrease in supply of air, oxygen, or ether would overcome this difficulty. Spasm of the glottis, I encountered in one animal; this was due to too light anesthesia.

My first series of experiments were conducted for the purpose of ascertaining, if possible, at what stage of asphyxia from illuminating gas, resuscitation was possible. In all the experiments the dogs were placed in an air-tight cabinet into which gas was forced. Within five minutes, depending on the height of the animal (the smaller ones living longer), the animal will succumb. During this time the animal is first seen to take deep inspirations followed by deep expirations; soon the muscles of extraordinary breathing are brought into play; the eyes become prominent and the animal is taken with general convulsions; this lasts only a short while, about

thirty seconds; following this spasm there is a general relaxation of all the muscles, and respiration all but ceases to recur at longer and longer intervals, with a slightly prolonged sighing inspiration, until they cease altogether; the heart stops and the animal is dead.

I have been able by means of intratracheal insufflation of air and oxygen to resuscitate two dogs that had been asphyxiated in this manner. In one, I used only air and having induced voluntary respiration I discontinued the insufflation and on removing the tube the animal gradually developed tonic convulsions, and therefore he was asphyxiated thirty-six hours later. In the other dog I used oxygen and air, and continued the insufflation for ten minutes after normal respiratory efforts began with the result that he was practically normal within two hours after exposure.

The results of insufflation following drowning were not encouraging; this I think is in part due to our inability to empty the alveoli of fluid. I attempted the emptying of the lungs by gravity, and think that the frequent changing of positions and withholding inflation until part of fluid is thus removed may bring about better results. Pressure on the chest wall in attempts at artificial respiration is very apt to rupture the lungs, as has been demonstrated in our experiments. This part of the subject I will leave for further investigation.

CONCLUSIONS

In conclusion permit me to make the following suggestions:

1. That intratracheal ether insufflation anesthesia be used more extensively in all operations about the head, neck and throat, where the hands of the anesthetist are apt to interfere with the surgeon's technic and to prevent the aspiration of mucus and blood.

2. That this method of anesthesia and distention of lung offers the safest means of exploring the chest cavity.

3. That this be used where vomiting during anesthesia is dangerous and when the necessary position of the patient interferes with the administration of the anesthesia in the ordinary way.

4. And finally, that all hospitals be equipped with some apparatus enabling one to resuscitate a patient in whom respiration suddenly has ceased during anesthesia, or, in cases of neonatorum asphyxia, or, poison from any cause producing respiratory paralysis.

Metz Building.

BIBLIOGRAPHY

Vesalius: De humanie Corporis fabrica, 1559.
Hook: Philos. Tr. fabrica, 539, 1667.
Smith: The Surgical Works of De Sault, 1884, i.
Le Roy: Jour. de physiol., 1827, vii; 1828, viii.
O'Dwyer: New York Med. Jour., 1885, xvii, 145, 605.
Fell: Forced Respiration in Opium Poisoning, Buffalo Med. and Surg. Jour., 1887, xxviii, 145.
Matas: Southern Surgical and Gynecological Assn., 1900.
Kirke's Physiology, 1903.
Sauerbruch: Zur Pathologie des offenen Pneumothorax u. die Grundlagen meines Verfahrens zu seiner Auschaltung, Mitteilungen aus den Grenzgebeiten der Med. u. Chir., 1904, xiii, 399.
Brauer: Die Auschaltung der Pneumothoraxfolgen mit Hilfe des Ueberdruckverfahrens, Mitteilungen aus den Grenzgebeiten der Med. u. Chir., 1904, xiii, 450, 483.
Kuhn: Verhandl. dent. Gesellschaft f. Chir., 1908, xxxviii T. 155.
Robinson: Jour. Am. Med. Assn., li, 803.
Meltzer and Auer: Ztschr. f. physiol., 1909, xxiii, 210, 442; Jour. Exper. Med., 1909, ii, 622.
Robinson: Surg., Gynec. and Obst., 1910, x, 287.
Meltzer: Med. Rec., 1910, lxxvii, 477.
Meyer: Ann. Surg., 1910, lii, 34; Med. Rec., 1910, lxxvii, 483.
Lilienthal: Ann. Surg., 1910, lii, 30.
Elsberg: Ann. Surg., 1910, lii, 23; Med. Rec., 1910, lvii, 493.
Carel: Med. Rec., 1910, lvii, 491.
Elsberg: Ann. Surg., 1911, liii, 161.
Meltzer: Jour. Am. Med. Assn., 1911, lvii, 521; Surg., Gynec. and Obst., 1911, xiii, 220.
Cotton and Boothby: Surg., Gynec. and Obst., 1911, xiii, 572; 1912, xv, 281; Ann. Surg., 1913, lvii, 43.
Boothby: Ann. Surg., 1912, lvi, 402.

SALVARSAN IN GENERAL PRACTICE*

HARRY L. ARNOLD, A.B., M.D.
OWOSSO, MICH.

So much of the periodical literature on salvarsan has been written from the point of view of the specialist or hospital man, that the writer has deemed it of interest to give the experiences of a general practitioner, in a small town, with practically no hospital or scientific facilities.

The method and apparatus to be described have been employed in one hundred and twelve cases to date, and with a single exception, a very cachectic infant of one week, the results have been uniformly satisfactory. A considerable proportion of the cases were individuals who had not shown satisfactory improvement under mercurial treatment. In one case the succinimide had been used up to the limit of tolerance without arresting the progress of the disease.

Many of the patients were unwilling or unable to pay for Wassermann tests, and accordingly none were made on them, although the advisability of it was in every case strongly urged. Most of the cases had two injections—one before treatment, and one, three months or so after stopping the mercury which was given after the salvarsan.

A physical examination was made of every patient, with especial attention given to the heart; serious or uncompensated heart lesions being regarded as valid contra-indications to the

*Read before the Society at Owosso, Mich., July 1, 1912

intravenous use of the drug. In all but the very early cases, the eyes were examined with the ophthalmoscope; serious optic neuritis being commonly regarded as a contra-indication. However, in one case, referred to me by an oculist, there was an optic neuritis of moderate severity which promptly subsided after treatment.

APPARATUS EMPLOYED

The apparatus used is simple in the extreme. A large, heavy glass bulb-funnel, of about 500 c.c. capacity, without stopcock or stopper, is used as the receptacle for the solution. About four feet of small gum tubing is connected to this with a pinch-cock and a large aspirating needle fitted to the distal end. A stoppered graduate cylinder of 50 c.c. capacity, and a pipette of 2 c.c. capacity are also required.

For the preparation of the solution of the drug, only one reagent is required, a 15 per cent. solution of sodium hydroxid in distilled water. It may be stated here that it is of the greatest importance that no water except distilled water, and no sodium chlorid or hydroxid, except the C. P., should ever be employed, as serious or even fatal results are said to follow the use of solutions made up with improper reagents. Even the sterilization of the apparatus must be carried out by boiling in distilled water. It is also important that the water used in making up the solution should be freshly distilled. The writer uses a simple combination of a Jena distilling flask and a Liebig condenser for the distillation of this water. Copper or block tin stills are said to be just as good, however.

TECHNIC OF ADMINISTRATION

The patient's arm is scrubbed from shoulder to wrist and a bichlorid pack applied and allowed to remain in place for at least half an hour. Asepsis is more than usually important from the fact that the solution of the drug has no antiseptic action against vegetable microbes, and is distinctly unfavorable to proper healing.

If the patient has large, prominent arm veins, the needle may be entered into the vein directly through the skin, but in individuals with much subcutaneous fat a small incision is often necessary. In case an incision is to be employed, it is well for the beginner not to make up the solution until the incision has been made and the vein laid bare; the apparatus should be boiling while the vein is being exposed.

The apparatus having been boiled for fifteen minutes in a covered dish (two large porcelain basins of the same size will be found very convenient for this purpose), with enough distilled water to cover the articles, the distilled water and sodium chlorid solutions are put on to boil. These are conveniently contained in Erlenmeyer flasks, of about 500 c.c. capacity, with gauze (not cotton) stoppers. The saline solution is made up by adding 7.5 grams of C. P. sodium chlorid to one liter of freshly distilled water. All solutions and utensils which come into contact with the solution of the drug should be kept as near to 100° C. as possible.

Everything being ready, the neck of the ampule is broken by making a file scratch near the body of it, and striking a sharp blow; or touching the scratch with a hot rod. About 20 or 30 c.c. of the hot sterile distilled water is poured into the graduate, and the drug added to this. If the entire dose of 0.6 gram is not to be given, the deduction can most easily be made by discarding a proper proportion of the solution. The stopper is placed in the graduate and the latter is vigorously shaken until a perfectly clear solution results. The writer does not use the glass beads so generally recommended, since it is so easy to get a perfectly clear solution without them, and the beads are much given to chipping and breaking when shaken. It should be observed here, that a perfectly clear solution without any undissolved or gelatinous particles in it, is absolutely essential.

Two c.c. of the sodium hydroxid solution are now added from the pipette, and the graduate shaken again. A voluminous, flocculent, yellow precipitate results. More of the alkali solution is now added drop by drop, with frequent shaking, until the solution again becomes clear. The approach of the point where the clearing occurs is indicated by a darkening of the liquid. Again, it is important to observe that an absolutely clear solution, with not even a trace of opalescence, should be had at this time. Keeping the solutions hot will aid in obtaining and keeping this effect.

About 350 c.c. of the hot sterile salt solution is now poured into the bulb-funnel and allowed to run rapidly through the tube and needle for a few seconds, to be sure that all air is removed from the tube. It is even well to strip the tube through the fingers, to be sure that no air bubbles remain in the tube or needle. The danger of air embolism is too well known to need mention here.

The needle is now introduced into the vein, either through the skin, or through an incision, the vein being in either case distended by means

of a tourniquet or blood-pressure cuff around the upper arm. This obstruction to the venous return should, of course, be removed at once when the needle is well entered. The needle should point in the direction of the blood-current. The salt solution should, of course, be flowing constantly during this procedure, to prevent the access of air to the needle end.

When it is seen that the salt solution is flowing satisfactorily, the bulb being held about three feet from the vein, the salvarsan solution is carefully poured into the bulb and allowed to mix with the salt solution. The dilute solution of the drug now enters the vein, and the flow should be slow; about fifteen minutes should be allowed for the 300 c.c. When the bulb is almost emptied, 50 or 75 c.c. of saline should be added, to wash out the tube and vein.

The temperature of the solution is apt to be too cold rather than too hot, unless great care is taken to keep everything as hot as possible. The slow flow through the small tube reduces the temperature greatly, so that unless the solution was almost boiling when placed in the bulb, it will be cooled down to 100° F., or so, when it reaches the needle. The temperature may be estimated closely enough by feeling of the tube and needle.

When the last added saline has run through the tube for a time, the needle is withdrawn from the vein and a compress instantly placed over the opening, and held there with moderate pressure for a few minutes. Then, in case the skin has been punctured, the opening is sealed with collodion; or if an incision has been made, it is sewed up with horse-hair sutures and a dry, sterile dressing applied. The patient should be in bed during the entire procedure, and it is the writer's practice to keep him there for twenty-four hours afterward.

When all of the above precautions, with regard to the solutions, have been carried out, little or no reaction is to be expected, except when the patient has a secondary syphilitic eruption, at the time of the transfusion, the papules may become larger, more engorged, and may become uncomfortable—the so-called Herxheimer reaction. The writer has had an opportunity of observing this in three cases. In several others with the same character of eruption the reaction was not observed.

If the water used in the preparation of the solutions is not freshly distilled, more or less reaction is always seen, consisting of chills and fever, often accompanied by diarrhea and vomiting. This has been ascribed to the presence in the water of bacteria and bacterial products, as it is well known that distilled water, simply kept in bottles after distillation, soon becomes full of microscopic forms of life. Filtering the water does not suffice to remove this objectionable material, since most of it is in solution.

METHODS OF ADMINISTRATION

As to choice of methods of administration of salvarsan, the writer is convinced that the intravenous method is superior to the others. The intense pain, attendant on the subcutaneous injection of the alkaline solution, renders that method very objectionable. The writer has not had uniformly good results with the injection of the neutral emulsion in sesame or light petroleum oil. Where repeated injections of the oily emulsion are used, as in old chronic cases, the results are better, but generally speaking the intravenous method has been most satisfactory. With the exception of four children and one cachectic adult, all cases have received the full dose of 0.6 gram.

As a routine procedure, all cases are put on mercury after the injection, even if they have previously proved refractory to the drug. Several of the patients, who through prejudice would not take mercury, have now gone more than two years without recurrence.

Unquestionably some extravagant claims have been made for salvarsan, but anyone who works with it for a time is bound to become enthusiastic over the results, which in many cases are little short of miraculous. One must not believe that a single dose of the drug will certainly cure every case of syphilis, even though it may in some cases. Its chief use is probably in those cases, so common to all of us, which are not readily controlled with mercury. As a forerunner to a course of mercury, it will always be a most valuable remedy. An intravenous injection, followed at intervals of a month by one or more intramuscular injections, is, in the writer's opinion, the most rational method of employment.

The usefulness of the drug in malaria, yaws, trypanosomiasis, relapsing fever and other tropical diseases, is not of very great interest to us in Michigan.

At an early meeting of the society, the writer hopes to report a case of pernicious anemia, apparently successfully treated with neosalvarsan.

812 Bradley Street.

THE MEDICAL INSPECTION OF SCHOOLS *

P. S. ROOT, M.D.
MONROE, MICH.

"A little flattery now and then is relished by the best of men." It is not that we ask for adulation; but rather do we desire that moral support which extends the helping hand and gives to us the cordial approval of a "well done." Perhaps we have been doing so well, so much, so long, that the public has, in a measure, taken all things for granted; that we can do no ill; and, that it is more blessed *for us* to give than to receive. As a subconscious working philosophy this view may serve a very useful purpose; but I believe the profession of to-day merits somewhat more of actual commendation than it receives. Along this line of thought let me request of you a little introspection: I wonder if we often pause to contemplate the high standard of integrity, devotion and self-abnegation maintained by the medical profession as a solidarity? Of course we do not claim to be without faults—human perfection is scarcely to be expected—but in the main our ideals are above the purely mercenary. Our aims, our deeds, our very ambitions wait on the physical betterment of humanity. Contrast, if you please, the principles and aspirations of the three great political parties now in the field. Is it really true that either of these parties will stand for those policies whose fruition would be for the greatest good to the greatest number? Note also the manufacturers of inert medicines and misbranded foods; the charlatans who sell their sugar and water at $4 a bottle; and all the hordes of more or less similar parasites who prey on humanity. We might go on enumerating examples where the humane attributes of our natures are made subservient to the greed for gain. Have you ever known a physician so low in degradation as to be found scattering the germs of diseases that he or she might reap a money consideration? There may be some such in our profession, but such exception does not invalidate the rule. On the contrary, the noble physician is ever to be found striving to gain the mastery over disease, that he may thereby save, or prolong human life.

It is not so many decades since we were instructed largely as to methods of treating diseases —not often of treating the patients—but recently we have made wonderful strides in the saving of lives by the prevention of infectious and contagious diseases. Witness if you please: Yellow fever in Cuba, typhoid in army camps, plague in China, California and the Philippine Islands and the reclamation of the great canal zone, where in their attempt to build the Panama Canal the French failed, largely by reason of the terrible inroads of preventable diseases. To-day, in this very locality, we find the mortality rate no higher than in Michigan. Thus from futility to hope; from hope to the realization of the actual prevention of disease—something for which our profession may justly take great pride.

I have alluded to these facts in medical history in order that we might better approach the subject assigned to me: "The Medical Inspection of Schools." It is a subject too comprehensive for me to hope to cover all its numerous phases in detail.

In the first place the schoolhouse should occupy a healthful site, with good drainage, a perfect system for the disposal of excrement, and an absolutely pure water-supply. The interior of the building should be so constructed as to afford good ventilation, plenty of light, a free supply of pure air and an adequate heating plant. Let me here observe that these desirable conditions are scarcely to be had, except by the employment of experts in this field of school construction. I think it safe to assert, that in the rural districts, there is not a single school building in this county that would pass the examination of a sanitary engineer. It follows, therefore, that the laity must be so educated that in the future these defects will be remedied. There is no doubt in my mind but that in a general way the state will soon lend its aid for betterment along these lines. Only recently, we note that the State Board of Health has abolished the common drinking-cup in schools.

Medical inspection of schools, in a concrete sense, means the physical examination of scholars for the purpose of ascertaining if they are suffering from chronic diseases, the results of which may induce mental impairment or future fatal illness; and secondly, to determine the presence of contagious or infectious maladies, and to exclude from school such pupils as may be found suffering from a contagious or infectious disease, or have been directly exposed thereto. Who is this work to be done by? Obviously, the physician is the proper person—indeed the only proper person. It is not always that his services are available, in which event the employment of a well-trained nurse will perhaps best serve our purpose in large centers of population. This arrangement leaves our country schools without

*Read before the Monroe County Medical Society, at Carleton, Mich., Oct. 17, 1912.

inspection of any kind save that given by teachers — ill-informed on medical subjects, or the spread of diseases among children.

What solution have we for this problem? Certainly, if inspection is necessary for our large schools, it is equally imperative that proper consideration be given our smaller schools. In the present state of public opinion, only a partial solution of the difficulty presents itself to my mind; I have reason to believe that nearly all teachers attend their county conventions; and, when thus in convention assembled, let some good physician be employed to deliver to them lectures bearing on the causes and prevention of diseases. This would be helpful, even if it were not all for which we would wish. At such lectures, symptoms could be outlined and plates used to illustrate the various eruptive diseases. Above all, let these teachers be instructed to err on the safe side.

I wish now to refer to the medical inspector who is to assume so important a rôle in school life. Such a person should be above petty jealousies; he should have a well-rounded medical education, and with it, sufficient experience to make a correct diagnosis. As to the ethics of the position, little, if any more, is needed than the precept of the "Golden Rule." Briefly, every case requiring medical or surgical treatment should be referred with a note to the parents of such child, with the request that the family physician be consulted. Under no circumstances should the medical inspector volunteer his services, unless the patient happens to be of a family that employs the inspector.

Let me now direct your attention to some of the conditions and diseases which must be passed on by our inspector. Where there is evidence of impaired vision, the eyes should be examined for near and distant vision, muscular defects and the various forms of conjunctivitis. Cases suffering from acute or chronic purulent conjunctivitis should be excluded from school. Not a few scholars will be found complaining of headache and these headaches are not infrequently due to eye-strain. Such patients will often require the services of an oculist in order to properly correct the defects. The family physician should always select the specialist. It is becoming more and more evident that infectious conditions within the mouth are the cause of not only local trouble, but they may induce more complex disturbances. Diseased teeth should be filled or extracted; and, where not in use, the toothbrush is to be recommended.

The tonsils should be examined. Here permit me to observe, that I am not one who favors the removal of every enlarged tonsil. But if the tonsils are actually diseased, or so enlarged as to impede the breathing, their removal is to be recommended—particularly so, if the child has adenoids. The inspector will be able to generally diagnose the presence of adenoids by the physical aspect of the child: the pallor, mouth-breathing and the deformed chest and throat; to confirm the diagnosis the finger may be gently passed behind the palate, when the growths will be readily felt. Many children with adenoids are deficient in mental aptitude, hard of hearing and slow in learning. In an examination of over thirteen thousand school children in Chicago last year, 42 per cent. were found to have adenoids. It is said that 88 per cent. of deafness in children is due to adenoid vegetations. This one condition alone should appeal imperatively, to us and the public, for the medical inspection of schools. Especially is this true when an operation offers every prospect of a speedy cure.

All children afflicted with scarlatina, diphtheria, measles and pertussis, must of course be excluded from school, and not permitted to return until such time as they can present a certificate of health from the family physician. I think, perhaps, many of us are apt to be remiss in not allowing or recommending sufficient time in quarantine. No child who has had scarlet fever should be suffered to mingle with other children until the physician has made a most careful examination as to the presence of adenitis, catarrh or desquamation. I admit that the prevalence of scarlatina is due to the mildness of the recent epidemics and the carelessness of parents. It seems to me that the Board of Health could afford valuable aid in this matter were they to place in the hands of citizens certain information relative to this, and other contagious diseases. Every child with a rash should be regarded with suspicion; a possible object of danger to itself, to its family and to the community. Pertussis, a common malady, is not devoid of danger; and if actual statistics were available, I feel certain that this disease, directly and indirectly, would be found to be the cause of more deaths than scarlet fever, at least in this county. I would, therefore, favor the exclusion and quarantine of children suffering from whooping-cough. Measles should also be zealously guarded against by actual quarantine.

Small-pox is not likely to come under observation very frequently; but the subject of vaccination calls for our support. We, as physicians, know that vaccination offers the one certain means of stamping out this dreaded disease; and

yet if we attempt to force it, there comes the cry of "personal liberty," etc. We do well to prize our constitutional rights and our liberty to act under those rights, but it does not follow that we are justified in rebelling against regulations that are so plainly for the common good. We make laws to protect society, laws to obviate cruelty to children, and why not a law that every child entering school shall show a good vaccination scar? At Wellesley College no student can enter until she has been vaccinated—a wise regulation this. It is generally admitted that children suffering from tuberculosis should not be admitted to the common schoolroom; not only because of the liability of spreading the infection, but because such commingling does not afford a favorable opportunity for their recovery. We note with pleasure that out-door schools are being provided for these children so that their education need not be neglected, while at the same time, they are receiving proper treatment. Children subject to parasitic skin diseases, mumps or chicken-pox should remain at home until they are no longer a source of danger to others.

It is perhaps to the various forms of inflammatory-throat troubles that the medical inspector's attention will be most frequently drawn. For instance, he will be asked to differentiate between simple infections, streptococcic infections and diphtheritic infections. I think you will agree with me that in their incipiency it is not possible to do this, indeed they may not be diagnosed even at a later period without cultures. It follows, therefore, that the inspector should be dogmatic in his decisions relative to the exclusion of all children complaining of sore throats.

The streptococcic infections, while contagious, are more quickly recovered from than is the diphtheritic, except where antitoxin has been used early. I speak of such recovery—in the case of diphtheria—as objective only, for some of the more recent investigations make it very evident that the Klebs-Löffler bacillus may remain in the throat for weeks after recovery. The patient has become immune, but may still be a dangerous carrier of the disease. If this condition is found to be at all general, the inspector must insist that the child remain out of school until the throat is free from this particular germ. There is another phase of diphtheria which is open to consideration, and that is the so-called membranous croup. Membranous croup means diphtheritic laryngitis—nothing more, nothing less—and every inspector should be governed accordingly.

It is unfortunate that so little attention is paid to hygiene in our common schools, for as you well know, the youthful brain is peculiarly susceptible to impressions, whether by precept, example or suggestion. Why is it then that the fundamental principles of sanitary science by common consent are left to colleges and universities for their study? It has been well said the common school is "The cradle of American Liberty," and as such is it not entitled to every advantage which may conduce to good health?

We are lost in wonder when we contemplate the remarkable inventions of this and other ages; we marvel at and admire these creations, and we spend long years in research that we may understand the scientific principles entering into their construction. This is as it should be. But what of the human body, the most wonderful of all machines, the masterpiece of God's handiwork? Do we not forget, "Oh man, that to know thyself," is knowledge most complete?

In conclusion, gentlemen, I am aware that I have not presented any thing new, and that my methods of covering this subject are doubtless faulty, but, however this may be, I desire to leave with you this one conviction: that we, as physicians, must be found in the forefront as leaders in the effort to create a public sentiment in favor of bettering the condition of our children, both in school and out of school. It may be asked, but of what profit is all of this to the doctor? Of money profit there certainly will be none. However, "it is not all of life to live." There are obligations which we owe to society, obligations to posterity, and a certain respect for those reciprocal relations so necessary to the stability of our social structure. Shall we not also have that inner assurance of having contributed in no small way to the public good, of having been loyal to our Hippocratic Oath, and of having added the example of our zeal to further the evolution of a better child, a better man and a better society?

NOTES ON LIFE INSURANCE EXAMINATIONS *

WILLIAM J. STAPLETON, JR., M.D.
DETROIT

The word insurance is from the Latin—*securus,* free from care; from *se,* without, and *cura,* care. Life insurance, in contradistinction to other forms, is a term used to cover a variety of transactions, in all of which the uncertainty of human life plays a more or less important part. In its simplest form, a life insurance contract

*Read at the meeting of the Tuscola County Medical Society, February, 1913.

contains an agreement on the part of the "insurer" (the company) to pay a stated sum on the death of the "insured" if that event occurs while the policy is in force. There are, of course, now a great many varieties of insurance so that one may select the kind best suited to the individual case. Life insurance is of great antiquity. In the times of the Greeks and the Romans there were many mutual organizations which sought to assist the individual in times of war and in case of death from plague, etc. These, however, were considerably different from the fraternal orders now in existence.

HISTORICAL

Life insurance, as we know it, is an offshoot of marine insurance. In the early days, the success or failure of a voyage depended largely on the personal qualities of the master; the owners of the ship and cargo took out insurance on the master so that in event of his death they would be recompensed.

The earliest known policy was taken out on the life of one William Gybbon in London, the year 1583.

The earliest life insurance company of which we have definite information was the Mercer's Company of London, established in 1699.

The first company established in the United States was founded in Philadelphia in 1758, and was called the Presbyterian Annuity and Life Insurance Company. It is now known as the Presbyterian Fund Life Insurance Company.

Up to the year 1840, there was little business done; then during the next ten years, up to 1850, several of the companies now doing business were organized, namely, the Mutual Life of New York in 1842, the New York Life in 1845, and others. Now there are several hundred companies organized to transact the various kinds of insurance business.

REASON FOR MEDICAL SELECTION

As has been stated, the fundamental principle of life insurance is the indemnification of a family of an individual against the pecuniary loss incident to his death; but, as this must be furnished at the lowest cost consistent with safety, it must be based on scientific and exact methods. The laws governing mortality must be thoroughly understood, and influences leading to unusual or extensive fluctuations in such mortality must be absent or reduced to a minimum. One of the methods used to minimize the mortality is by means of medical selection. This is where the medical examiner enters the scene.

In early insurance there was no medical examination and even now there are some people connected with insurance companies who think a medical examination unnecessary. Needless to say I am not one of them.

The early applicant signed a certificate saying he was in good health. He appeared in person before the trustees who might accept or reject him. Thus, you see, the method in vogue in the by-gone days was quite different from now. The importance of medical selection was not fully recognized until the latter half of the nineteenth century; although, credit is to be given to the Equitable of London (1762). In this country the Mutual Life of New York, in the year 1867, established a system of medical referees, who in turn appointed examiners for the different localities.

THE MEDICAL EXAMINER

Much has been written on the subject of the medical examiner and his qualifications. He is a very important person in insurance work. To him comes the applicant after the agent has secured the business. The qualities desired by an insurance company of its examiner are many and diversified.

He must be a thoroughly qualified man, possessing courage, firmness, decision, shrewdness and tact. It is his duty to prove or disprove the statement that the applicant before him is in good health; a problem exactly the opposite of the one before the physician in general practice.

There is a vast difference in making a physical examination when the patient comes for advice and when he is examined for insurance. In the first instance, the patient will tell his physician every symptom that he has, and frequently more; but an applicant for insurance will tell only what he has to. He does not usually intend to conceal facts wilfully, but he thinks it is the business of the examiner to dig out the information desired as best he can. Here is where the skilful examiner gets the truth.

May I call your attention to the following; it is a clipping entitled, "Life Insurance Examinations":

> "It was recently said by the physician-in-chief of a large life insurance company, that on investigation it was found that with all their examiners only 25 per cent. of the applicants were completely examined. In other words, histories were poorly and inaccurately taken, the heart and chest were frequently examined without the patient removing his clothing and special examinations of blood-pressure, urinalysis, etc., were very carelessly made. This criticism not only reacts on the individual doctor, but makes an extremely poor impression on many business men connected with insurance companies, and on the applicant examined. To be appointed examiner for a life insurance company is not only an honor and a responsibility, but it is a legitimate practice. The man without a physician

often takes for his family doctor some physician who has examined him for life insurance. Insurance companies are now making rigid investigations of their examiners, and it behooves every practitioner who does insurance work to do the work for which he is well paid thoroughly accurately and conscientiously.[1]

THE QUESTION OF FEES

There has been a great deal of agitation in the medical journals regarding the fees paid by various companies for medical examinations. I am in favor of the flat five-dollar rate, and have had several arguments with the board of directors relative to the same. The fee bill of the Northern Assurance Company is as follows:

When the amount of the policy is over $3,000 fee	$5.00
When the amount of the policy is for $3,000 or less	3.00
For microscopical examination of the urine	2.00
Each requested additional analysis of urine	.50
Preparing sample of urine to send to home office	.50

Fees are based on the cost of insurance and the amount written; thus, the company can pay more for a $5,000 policy than a $3,000 policy, because of the larger premium received. The fee table given above is that of the American Life Convention, and is in force in over a hundred companies.

THE EXAMINER AND THE AGENT

The agent is a source of annoyance oftimes to the examiner. The physician does not always realize the hard work done by an agent before he signs up the applicant. The examiner should be prepared to act as quickly as possible in making examinations. It is not always possible for an agent to arrange for the examination to be made at the time most convenient to the examining physician—this we should recognize, and unless we do so, we should not take the position of medical examiner. Good agents try to arrange a time that is mutually agreeable, and the better the agent the less trouble we have.

It is well to acquaint the agent with your office hours so that he may, as much as possible, meet your convenience.

If you examine for more than one company, be neutral; for if you do not, the agent of another company cannot regard you as best fitted to do his work. Remember the Golden Rule applies here as elsewhere.

THE EXAMINER AND THE APPLICANT

It is a serious matter for a man to be turned down by an insurance company. "Once an applicant is rejected it is almost impossible for him to obtain insurance. You can see, therefore, the great injustice that may be done a person by lack of care on the part of the examiner. Every applicant is entitled to a careful and conscientious examination and a fair and full statement of all facts affecting his insurability."[2]

One often creates hard feelings or even enemies where it happens that unfavorable action has been taken on applications, but this must not prevent the examiner from doing his duty.

THE MEDICAL EXAMINER AND THE MEDICAL DIRECTOR

The medical director can take nothing for granted—he is examining applications, not applicants, and unless every question is answered as it should be he is unable to pass on it properly. The medical examiners are the eyes, ears and judgment of the medical department at the home office. Each examiner is a little piece of the medical department, set down in his own particular locality, and, if he can translate his judgment of a risk onto a sheet of paper in such terms as to make it clear and precise to the medical director, he is then doing perfect work as a medical examiner.

The medical director is only human and oftentimes makes mistakes. The examiner can help a great deal by realizing that the medical director does not see the applicant and depends on him for the mental picture that is necessary in order that a basis may be had for decision.

THE EXAMINATION

What shall we say of this important part of our talk? I am not going to make any attempt at teaching you men your work, but simply wish to suggest the following thoughts which come to mind after reviewing applications for the last five years:

First, the question of:

Appendicitis.—In answering always state number of attacks; whether abscess formed; and, especially whether an operation has been performed. If so, whether the appendix has been removed or not, and duration of treatment.

Syphilis.—State length of time lapsed since end of treatment; examine carefully for any evidence—five years time to elapse before any form of acceptance. Examine the epitrochlear and suboccipital gland.

Use of Alcohol.—Always obtain a definite answer as to the amount taken; avoid such terms as "several drinks," "drinks when he feels like it," etc. They convey absolutely no meaning. There are so many kinds of drinkers that a definite answer is necessary.

"Keeleyites."—They are looked on with disfavor. As a rule they are rejected; some companies will accept them after a period of five years, if it can be proven beyond a doubt that the applicant has not taken liquor during that time. Any man who has been an alcoholic is not a first class risk; they are too apt

1. Old Dominion Journal of Med. and Surg.

2. Greene, Life Insurance Examinations.

to go back to "John Barleycorn," especially, if they suffer business reverses or have any worry or trouble. Reformed drinkers show a heavy mortality in all cases.

Nervous Troubles.—Look out for insanity, delirium tremens, chronic alcoholism or some organic disease.

Rheumatism.—Always state clearly the form of rheumatism, the date and number of attacks, joints affected, duration of illness, and especially find out whether the heart has been affected. One severe attack of inflammatory rheumatism calls for a two-year postponement; repeated attacks mean rejection. It is well to ask whether a surgical operation has been performed or not; by this question the examiner may find that the pericardium has been aspirated; or, an operation for septic or tubercular joint performed. Renal colic, Bright's disease, acute and chronic pyelitis, mucous colitis, uterine and ovarian disease, chronic sciatic, abdominal aneurysm, spinal caries are sometimes called rheumatism by the applicant.

Headaches.—Headache is only a symptom pointing to some derangement elsewhere in the system.

As we know, headache may be due to disease of the brain, Bright's disease, neuralgia, nervousness, lithemia, eye strain, cerebral congestion, chronic lead poisoning, auto-intoxication, syphilis, chronic otitis, nasal catarrah, carious teeth, uterine or ovarian disease, anemia, dyspepsia, etc. It is, therefore, important that the examiner designate, if possible, the cause of the headache. A little judicious questioning will often bring out the desired information and clear up a mooted point.

On our blank we ask two questions which give to the examiner valuable information with very little effort—first, the knee-jerk, and second, the eye-reflex.

Knee-Jerk.—The patella reflex is nearly always present in health and its absence points especially to locomotor ataxia (syphilis); although, it may be due to peripheral neuritis, poliomyelitis, advanced diabetes mellitus, and, any and all diseases involving the posterior column of the cord or the second, third and fourth posterior nerve roots of the lumbar segments. It has been found lacking by Greene in several cases of aneurysm of the aorta. This simple procedure you see has a wide range of application.

Eye-Reflex.—Abnormalities in response to light and accommodation point to locomotor ataxia, aneurysm of the aorta, general paralysis of the insane and brain tumor.

A marked contraction of pupil occurs in locomotor ataxia and in chronic opium users.

BLOOD-PRESSURE

The use of the sphygmomanometer, or the blood-pressure apparatus, is becoming more and more called for in practice and insurance work. Many of the companies are making it a routine in all examinations where the amount is over $2,500, and the applicant 40 years of age.

It behooves us to become familiar with the working of this instrument. There are several types of apparatus in the market. Two principal kinds are, the mercury column and the spring type. We have both forms; personally, I prefer the "Tycos," it is convenient to carry and use, and I see no reason to doubt its accuracy.

The normal blood-pressure maximal (systolic) in adults varies from 105 to 145 millimeters. In children over 2 years of age, from 85 to 110 millimeters. In females the pressure is about 10 millimeters less than in males. In normal minimal pressure ranges from 25 to 40 millimeters below the maximal pressure. The normal pulse ranges from 25 to 40 millimeters. The systolic pressure above 150, or below 100 millimeters, and a pulse-pressure above 50, or below 20 millimeters may be regarded as pathological.

Variation in Health: The blood-pressure varies at different times of the day, and is affected by position, exercise, excitement, digestion, etc.; but as these are transitory factors, repeated examinations will lead to their elimination.

The maximal pressure represents heart energy. The minimal pressure represents the peripheral resistance (vasomotor), while the pulse-pressure (the difference between the maximal and minimal pressure) represents the head of pressure in the arteries tending to drive the blood onward into the peripheral arterioles.

Arterial Hypertension: Conditions having an abnormally high arterial tension are due to a variety of causes, chief of which are mentioned: excesses of various kinds, particularly mental or physical overwork, overeating, alcohol and drugs, following the acute infectious diseases—especially typhoid and scarlet fever, syphilis and plumbism. The principal primary cause of most of such cases may be summed up as an intoxication of some kind.

In individuals past middle life, hypertension is frequently associated with great and untiring energy, and it is interesting to note how commonly cases of sudden death occur where the patient has remarked shortly before that he never felt better in his life.

The effects of hypertension on the heart is to force it to do an increased amount of work in order to maintain the same intensity of capillary circulation; while for the arteries hypertension diminishes their distensibility, and the sharp rise in pressure at every systole introduces the danger of rupture or aneurysm.

For our purpose, cases of hypertension may be divided into: (1) Early cases manifesting no other evidence of distinct disease; (2) those cases where there is other evidence that degenerative changes have already taken place.

In the first group, the hypertension is frequently found in those individuals who otherwise seem to be in good health; and is usually first discovered on application for life insurance, or

when examined for some other condition. Since the use of the sphygmomanometer has become more general, it has been found that these cases occur quite commonly, which indicates the need of a blood-pressure examination in every new case coming to the physician.

Early cases of hypertension lead to degenerative changes in the arteries, and its consequences — cardiovascular and renal disease — and their early recognition and proper treatment calls for the best efforts of the scientific and pains-taking physician.

The second group comprises those cases in which the hypertension is usually accompanied by other symptoms, subjective or objective, which may lead to a diagnosis of one or more of the diseases associated with a high blood-pressure. The information gained from frequent examinations of the arterial pressure in these cases—not only for the purpose of diagnosis, but also for the purpose of establishing the progress of the disease, and as a guide to the effectiveness of the treatment instituted—is of inestimable value.

Hypotension is found in almost all cases of moderately advanced tuberculosis, or in early cases when the toxemia is marked; except when arteriosclerosis, the so-called arthritic or gouty diathesis, chronic nephritis or diabetes complicate tuberculosis and bring about a normal pressure or hypertension. Examination revealing a minimal pressure of below 20 millimeters would indicate a serious pathological condition. These cases should be kept under observation.

CONCLUSIONS

To sum up my paper I offer the following suggestions:[3]

1. Answer all questions.
2. Give necessary details.
3. Look carefully into the habits of the applicant.
4. Answer correspondence promptly.
5. Show an interest in the interests of the company.
6. Show as much skill as you can in diagnosing.

Gentlemen, if what I have read to you is not new and you have heard it before, I can only say with Kipling:

"When 'Omer smote 'is blomnin' lyre
He'd 'eard men sing by land and sea,
An' what 'e thought 'e might require
'E went and took — the same as me."

176 Lafayette Boulevard.

3. Rogers: Lancet-Clinic, Sept. 21, 1912.

BIBLIOGRAPHY

Principles of Insurance—Gephart.
Life Insurance Examinations—Symonds.
Life Agents' Manual—Fish.
Examination for Life Insurance—Greene.
Blood-Pressure—W. H. Cowing.
The Sphygmomanometer—Faught.
Blood-Pressure and the Sphygmomanometer—Rogers.
Practical Life Insurance Examinations—Ramsey.
Vance on Insurance.
Article on Life Insurance Examination—Osler's Modern Medicine Vol. VI, Green.
Article on Life Insurance Examination—Reference Handbook of the Medical Sciences, Vol. V, Payne.
Life Insurance and General Practice—E. M. Brockbank, Oxford Med. Pub.
Yale Insurance Lecturer.
Article on Insurance—International.

MEDICAL JURISPRUDENCE. WORKMAN'S COMPENSATION ACT *

A. H. McMILLAN, ATTY. AT LAW
BAY CITY, MICH.

Medical jurisprudence is sometimes known as forensic medicine. The former title emphasizes the legal part of the subject, the latter title, the medical part. The former is a more appropriate title for the present paper because the legal, rather than the medical, aspect of the subject will be made more prominent.

In this paper I shall not attempt to cover the whole subject, but shall deal chiefly with the physician and surgeon as an expert witness, both in court and under the provisions of the Workman's Compensation and Insurance Law, together with the expert's pay as such; treating incidentally the subject of privileged communications. These subjects will be discussed with a special reference to the law of Michigan.

EXPERT TESTIMONY

The use of expert testimony is one of the most important and striking developments of modern jurisprudence. The old common law of England recognized the right of parties to call as witnesses those who were especially skilled in or familiar with any particular art or science, in order to explain words or phrases having a peculiar meaning in such art or science.[1] From this has developed the practice of calling experts in mechanics to give opinions in patent cases, and experts in medical science to give opinions in cases involving medical questions. The rule admitting the testimony of experts is exceptional, for no principle of law is better settled than that the opinions of witnesses are, in general, inadmissible in evidence.[2] "It is the peculiar province of the jury to determine the inferences which are to be drawn from the facts."[3]

*Read before the Bay County Medical Society, Feb. 11, 1913.

1. Syst. of Legal Med., 13.
2. Daniels vs. Mosher, 2 Michigan, 283.
3. Rogers on Expert Testimony, Section 3.

The rules of science about which the expert is examined are considered facts just as much as are the other facts testified to by witnesses from their senses of sight and hearing. In certain domains of science it is possible for men of equal attainments to differ in their view as to the rules applicable to a given state of physical or mental phenomena presented to them; hence, comes the sphere of what is called opinion evidence.[4]

WHEN ADMISSIBLE

The opinions of experts are admissible in evidence in those cases in which the matter of inquiry is such that inexperienced persons are unlikely to prove capable of forming a correct judgment on them, for the reason that the subject matter so far partakes of the nature of the science, art or trade, as to require a previous habit, or experience, or study in it, to acquire a knowledge of it.[5, 6]

WHEN INADMISSIBLE

The testimony of experts is not admissible on a matter concerning which, with the same knowledge of the facts, the opinion of any one else would have as much weight.[7, 8, 9] Neither is the testimony of experts, who have made *ex-parte* investigations admissible. Hence, it is important that notice should be given to the opposing interest of the intention to have experts make an investigation of the facts involved. For instance, if it is proposed to make an examination of blood on clothing; or, of the stomach of a deceased person in cases of alleged poisoning; there are strong reasons why such an examination should be undertaken after notice has been given, in order that the divers interests might be properly represented at such an examination.[10] This rule is one for you gentlemen to bear in mind when asked to make any such examination on behalf of a private individual, or interest. The principle does not apply, however, to investigations conducted by a public officer immediately after the commission of a crime, for the public action of such a functionary is said to be due notice to all parties that the proceeding is taking place.[11]

COMPETENCY OF EXPERTS

You have noticed, of course, when examined as expert witnesses, that your qualifications as an expert are first inquired into. This is in order to determine your competency as an expert; for it must be shown that the expert has special and peculiar knowledge or skill in his department before he can be permitted to give opinion evidence.[12]

In this preliminary examination, the witness may be asked to state his acquaintance with the subject matter in reference to which his opinion is desired, and what he has done to qualify himself as an expert in that particular department of inquiry;[13] but there is no exact test for determining the amount of experience an expert should possess.[14] A witness is not incompetent to testify as an expert if his special knowledge of the particular subject of inquiry has not been derived from experience or actual observation, but from the reading and study of standard authorities. But, such reading and study must be in the line of his special calling or profession. Thus a lawyer would not be competent to express an opinion on a question of medical science, from information which he might acquire from reading medical authorities bearing on such question.[15] But a physician would be competent to give his opinion on a medical question from information derived by him from reading medical authorities on that question.

RULES FOR EXAMINATION OF EXPERTS

It being determined by the court that the witness introduced possesses special skill in the subject matter of inquiry, his examination is next in order, and this must proceed in accordance with the rules that it has been necessary to establish in relation to the giving of such testimony. In considering these rules, it must be borne in mind that the purpose of the examination of the expert is not to decide the question as to the guilt or innocence, the liability or non-liability, of the defendant in the case. That is a question for the jury. The purpose of the examination is to give the jury the conclusions of medical science in reference to the facts involved.

So it is necessary that questions to experts should be so framed as not to call on the witness for a critical review of the testimony given by the other witnesses, compelling the expert to draw inferences or conclusions of fact from the testimony; or, to pass on the creditability of the witnesses; the general rule being: that an expert should not be asked a question in such a manner as to cover the very question to be submitted to the jury.[16]

4. Syst. of Legal Medicine, Section 15.
5. Hill vs. Lafayette Insurance Company, 2 Michigan, 476.
6. Rogers on Expert Testimony, Section 5.
7. Rogers on Expert Testimony, Section 8.
8. Opinions based on speculative data are not admissible.
9. Cooper vs. State, 23 Texas, 336, 337.
10. Rogers on Expert Testimony, Section 14.
11. Ibid
12. Rogers on Expert Testimony, Section 15.
13. Rogers, Section 18.
14. Rogers, Section 19.
15. Rogers, Section 20.
16. Clark vs. Detroit Locomotive Works, 32 Mich., 348.

HYPOTHETICAL QUESTION

An expert, not being allowed to draw inferences, or conclusions of fact from the evidence, his opinion should be asked on a hypothetical statement of facts.[17] The rule is that the witness must either be present and hear all of the testimony and take it all into consideration in answering the question, or the testimony must be summed up in the question put to him; and, in either case, the question is put to him hypothetically, whether, if certain facts testified to are true, he can form an opinion, and what that opinion is.[18]

We have now come to the discussion of a much criticized feature of expert testimony, namely, the hypothetical question. In a recent number of the *Saturday Evening Post* (Dec. 7, 1912), the following description of its use is given:

"The jury being chosen, the trial proper now begins and continues until the defendant's cash reserve runs low. Then the big scene comes—the hypothetic question is brought in on a truck and is read to the alienists. In every murder trial where insanity is the defense, alienists are introduced. They should not be confused with the alienators who figure in divorce cases only.

"An alienist is a family doctor who hated the nightwork. He mounts the stand and the hypothetic question is read to him. A hypothetic question is organized on the same principle as a certain train that used to run on a narrow-gauge road down in our country years ago. You could climb aboard anywhere, go as far as you pleased, enjoy a pleasant nap en route, and drop off at a point that looked exactly like the one where you got on. So it is with a hypothetical question. Outside of persons who were alienists by profession, I never knew but one man who ever tried to make out the true meaning of a hypothetical question. He came by this tendency honestly. It was in his blood. He was a cousin of the man who wrote the Lord's Prayer on the back of a postage stamp; and his uncle was the person who spent two years figuring out the number of seeds in a prize pumpkin in order to win a cash prize of five dollars.

"A good, long hypothetic question, though, which reads the same backward or forward, will hold an alienist spell-bound by the hour, and when it is finished he invariably has the right answer. I never knew of an instance where the alienist failed to make the answer that was agreeable to the side for which he was working."

A number of forcible objections against the use of the hypothetical question are brought out in the quotation just read. It is also contended that this form of question assumes as proved whatever the attorney putting the question has tried to prove, and combines insignificant, with important circumstances and alleged facts, supported by slight testimony, with other facts of which the proof is strong and convincing, while omitting still other facts of equal importance which might be thoroughly established by the other side. In fact, this form of question is nothing more than a summing up by the counsel putting all the allegations of fact in his favor, no matter by how little evidence supported, and omitting all other facts, no matter how clearly established. Expert testimony, based on such one-sided hypothetical questions, is of necessity favorable to the questioner and accounts for much of the seeming inconsistency of able and learned expert witnesses.

It has been suggested as a remedy for the evil complained of, that the hypothetical question be framed by the judge, based on the testimony of each side, and that the witness be asked to give his opinion on each theory. This suggestion would only partially obviate the difficulty, because the judge would be called on to decide what facts had been established by either side. So long as the issue is to be decided by a jury, there seems to be no escape from the necessity of hypothetical questions in some form. If the hypothetical question is so put as to require the witness to decide from the evidence which side preponderates, and to find conclusions from the evidence, in order to reconcile conflicting facts, the question, though hypothetical, is improper.[19]

After the attorneys on the side which called the expert as a witness have propounded their hypothetical question, opposing counsel on cross examination may put the same question to the same witness based on the facts assumed in the opposing theory. It is good practice for the expert to request the counsel calling him to submit the hypothetical question to him in writing before he is put on the stand. This, of course, cannot be required of the opposing counsel who cross examines him.

While the court determines the competency of the witness to testify as an expert, the weight to be accorded to his testimony is a question for the jury. The opinion of an expert cannot be considered of material value, unless the hypothetical question put to him is fully sustained by the evidence. There is no rule of law to require jurors to surrender their judgment implicitly to, or even to give a controlling influence to the opinions of scientific witnesses, however learned or accomplished they may be. The testimony of experts is to be considered like any other testi-

17. Rogers, Section 25.
18. Dickinson vs. Fitchburg, 13 Gray, 546, 556.
19. Rogers, Section 26.

mony, and is to be tried by the same tests, and receive just so much weight and credit as the jury may deem it entitled to; when viewed in connection with all the circumstances of the case.[20]

MOMENTARY OR TEMPORARY INSANITY

Much of the criticism of expert testimony has come from its use and abuse in murder cases, as a basis for the defense of momentary or temporary insanity, sometimes called "brain storms." This defense really amounts to a little more than inexcusable and uncontrollable anger. It is usually made use of in extreme cases, such as those based on the "Unwritten Law." This alleged "Unwritten Law" is often invoked where the accused has slain the seducer of his wife or other relative. The legal profession well knows that there is no such thing as the so-called "Unwritten Law." They also believe that there is no such thing as a "brain storm," but realize that for a good fee an expert alienist can be induced to describe such a mental tempest. It seems absurd to call medical experts to prove or disprove the proposition that a man who is perfectly sane a moment before the act and perfectly sane the moment after it, can temporarily be bereft of his reason by rage or indignation so as not to be responsible for his acts. This seems to be a question of common sense and common experience which a jury are competent to decide for themselves. It would also be treated as such were it not for the fact that gentlemen of our profession seem always able to persuade gentlemen of your profession, with the aid of a proper fee, to treat the question as a scientific and medical one on which they are competent to give expert testimony. Of course, it is true that our profession, so far as they furnish judges to the land, are responsible for letting your profession earn comfortable fees by raising a question of common sense into the dignity of a medical fact. Perhaps the reason we are so tolerant, is because we enjoy fat retainers ourselves.

PRIVILEGED COMMUNICATIONS

In connection with the testimony of medical men, both as experts and otherwise, in some cases, arises the question of the privilege of the patient. The laws of Michigan provide:

"No person duly authorized to practice physic or surgery shall be allowed to disclose any information which he may have acquired in attending any patient, in his professional character, and which information was necessary to enable him to prescribe for such patient as a physician, or to do any act for him as a surgeon: Provided, that after the decease of such patient, in a contest on the question of admitting the will of such patient to probate, the heirs at law of such patient, whether proponents or contestants of his will, shall be deemed to be personal representatives of such deceased patient for the purpose of waiving the privilege hereinbefore created."—Act 234 of 1909.

The object of the statute is to prevent the abuse of the confidential relation existing between the physician and his patient, and is for the protection of the latter. Where the relation is such that no confidence is reposed, there is none to be abused. The law was passed to enable persons to secure medical aid without betrayal of confidence. The information referred to is not confined to communications made by the patient to the physician, but the law protects, with the veil of privilege, whatever, in order to enable the physician to prescribe, was disclosed to any of his senses, and which in any way was brought to his knowledge for that purpose. All disclosures made by the patient to the physician respecting his ailments are privileged, whether they are necessary to enable the doctor to prescribe for him as physician or not. The privilege does not cover information not necessary to enable the doctor to prescribe for his patient, unless it is in respect to his ailments. Thus, a physician may testify that he is the family physician of a patient and tell the number and dates of his professional visits. The fact as to treatment by the physician is not a matter of privilege. The privilege is personal with the patient, and is of no force if the latter consents to a disclosure. It is not the doctor's privilege and it continues indefinitely. The privilege may be waived and must be claimed before the testimony is admitted, or it is waived. What the patient may do in his lifetime, those who represent him after his death may do for the protection of the interest they claim under him.[21]

REGULATION OF EMPLOYMENT OF EXPERTS

The laws of Michigan have also undertaken to regulate the employment of expert witnesses. In 1909, an act was passed providing that no expert witness should be paid or receive as compensation in any given case, for his services as such, a sum in excess of the ordinary witness fees provided by law, unless the court before whom such witness is to appear or has appeared awards a larger sum. Any witness who directly or indirectly receives a larger sum than such award, and any person who pays such a witness a larger sum than such award is made guilty of a misdemeanor, punishable by

20. Rogers, Section 37.

21. Notes to Section 10181, Compiled Laws of 1897.

a fine not exceeding one thousand dollars, or by imprisonment in the county jail not to exceed one year, or both, in the discretion of the court and may further be punished for contempt. This act is declared not to be applicable to witnesses testifying to the established facts or admissions of science, nor to any other specific facts, but only to witnesses testifying to matters of opinion. You gentlemen should, therefore, bear in mind that you are not at liberty to agree on or charge more than the ordinary witness fee of one dollar per day for your services as an expert witness in any given case, but are always at liberty to leave the matter to the court to determine either in advance or after your appearance as an expert witness. This, of course, does not forbid you making a charge to counsel for consultation previous to trial, or for the examination of the parties to the case. Such matters are aside from the appearance as a witness in court.

The same law provides that no more than three experts shall testify on either side as to the same issue in any given case—except in criminal prosecutions for homicide—but the court may permit an additional number of witnesses to testify.

The law attempted to provide for the appointment of three designated persons to investigate issues involving expert knowledge or opinion in murder cases and to have their compensation paid by the county—the fact that they were the experts appointed by the court to be made known to the jury—but this provision was held unconstitutional by our Supreme Court as tending to deprive the accused of his liberty without due process of law.[22]

In this decision our Supreme Court said:

"We do not overlook the fact that the statute here considered was designed to correct an evil long recognized as tending to bring the administration of the criminal law into disrepute, in cases where insanity is urged as a defense, but we are of opinion that the true remedy for this evil rests in the development of a livelier sense of responsibility to the public for the proper and decent administration of justice on the part of both the legal and medical professions, rather than in revolutionary legislation."

WORKMAN'S COMPENSATION LAW

We now come to one of the most interesting and at the same time beneficent pieces of legislation adopted in this state in recent times, namely, the workman's compensation act. It is appropriate to be referred to in this paper because of the references therein to physicians and to medical examinations. Let us see in the first place what the act in general is. The title of the act indicates that it relates to the liability of employers for injuries or death sustained by their employees; provides compensation for such injuries or death; a method for the payment of the same, and establishes an industrial accident board to administer the law. The act applies to municipal corporations, including state, county, city, township, village and school district, and to such other employers of labor, whether person, firm or corporation, as shall elect to come under the act. The act makes the acceptance of its terms by employers of labor very desirable by taking away from them in any actions for damages brought by employees the strongest defenses formerly interposed to such actions on the part of employers. In other words, any employer of labor who has not accepted the provisions of the act, cannot urge the following defenses:

(a) That the employee was negligent, unless such negligence was willful.

(b) That the injury was caused by the negligence of a fellow employee.

(c) That the employee had assumed the risks of his employment, or arising from the failure of his employer to provide safe premises and suitable appliances.

The act does not apply to suits to recover damages for personal injuries sustained by household servants and farm laborers. All other employees whose employers have accepted the provisions of the act are subject to it; unless the employee has given notice to his employer that he does not wish to come under it.

An "Employee" is defined in the act to be: first, every person in the service of a municipal corporation under any appointment, or contract of hire, express or implied, written or oral, except any official of such municipality, and provided that one employed by a contractor, who has contracted with the municipality, is not considered an employee of the municipality; second, every person in the service of another under any contract of hire, express or implied, oral or written, including aliens and minors who are legally permitted to work under the laws of the state, but not including any persons whose employment is but casual or is not in the usual course of the trade, business, profession or occupation of his employer. As an illustration of the persons meant by the last exception, we may take a man who is employed by a physician to clean his sidewalk. Such an employee would not be covered by the law because his employment was only casual and was not in the usual course of his employer's profession.

An employee who is injured in the course of and as a result of his employment, unless by reason of his own intentional and willful conduct, is entitled to receive certain stipulated compensation, which is carefully laid down in the act. No compensation is provided for any injury which does not incapacitate the employee for at least two weeks from earning full wages, but if incapacity extends longer than two weeks, compensation begins on the fifteenth day after the injury, but if the disability continues eight weeks or longer, the compensation is computed from the date of the injury. During the first three weeks after the injury, the employer is required to furnish, or cause to be furnished, reasonable medical and hospital services and medicines when they are needed.

If death results from the injury, as a proximate cause, the employer must pay to the dependents of the employee, who were wholly dependent on his earnings for support at the time of the injury, a weekly pay-

22. People vs. Dickerson, 17 D. L. N., 1044; Act 175, of 1905.

ment of one-half his average weekly wages, but not more than ten dollars nor less than four dollars per week for no less than 300 weeks from the date of the injury. If the dependents are only partly dependent on the employee's earnings for support, the weekly compensation is to be in proportion to the contributions by the employee to the dependent person. Dependents include only husbands, widows, lineal descendants or ancestors, brothers or sister. In case there are no dependents, the employer must pay the reasonable expense of the last sickness and burying, not to exceed $200. If totally incapacitated, a weekly compensation is provided of one-half the average weekly wage but not to exceed ten dollars or less than four dollars a week, but not for longer than 500 weeks nor more than a total of $4,000. For partial incapacity, one-half the difference between the average weekly wage before and after the injury is provided. For certain specified injuries, such as the loss of a thumb, a definite schedule of compensation for specified periods is provided: the schedule looking much like those attached to accident insurance policies. If death ensues after an accident, the weekly indemnity ceases, and death benefits are provided. Savings or insurance, or other benefits, if received by the employee or his family, are not to be considered.

The act provides for an industrial accident board consisting of three members appointed by the governor. This board has an office in Lansing, and is the tribunal established to administer the law. The acceptances of the act by employers are made to, and recorded by, the board. If an accident happens to an employee, he must give notice to the employer within three months and must make claim for compensation within six months, or in case of death, or of physical or mental incapacity such claim must be made within six months after death or the removal of the physical or mental incapacity. The notice is to be in writing and to state in ordinary language the time, place and cause of the injury. Want of such written notice is not fatal, if the employer had actual notice or knowledge of the injury. If after the notice is given, the employer or his insurance company, and the employee, come to an agreement concerning compensation, a memorandum of such agreement must be filed and approved by the board. If the agreement is not reached, either party may notify the board who then call for the formation of an arbitration committee, which consists of one member of the board, who acts as chairman, and two other members named respectively by the two parties. The committee of arbitration makes such inquiries and investigations as it deems necessary, holding its hearings at the locality where the injury occurred. Its decision is final unless a claim for review is filed in seven days, in which case the board reviews the decision of the committee. The supreme court of the state has power to review questions of law involved in any decision by the accident board.

Every employer accepting the provisions of the act has the right to specify, subject to the approval of the board, one of the following methods for the payment of compensation under the act: First, on furnishing such proof of his solvency and financial ability to pay the compensation, to make such payments direct to his employees; or second, to insure against such liability in an employers' liability company organized under the laws of or authorized to do business in Michigan; or third, to become a member of the mutual liability insurance organization administered by the commissioner of insurance of the state.

The purpose of the act is to afford employees speedy, effective and inexpensive collection of damages. Services of a lawyer are not necessary on behalf of the employees. Calling on the industrial accident board a few weeks ago, I was surprised to learn the volume of their business. They have reported to them on an average of over twelve fatal accidents per month and 500 non-fatal accidents. They have on file about 5,000 acceptances of the act by employers and also copies of all policies of employers' liability insurance. The state insurance department is at the same time conducting an employers' mutual liability insurance company, which is designed to furnish cheap insurance for those who avail themselves of its benefits. Whether this will be done successfully remains to be seen and depends largely on how many employers take advantage of it. At present, there have not been many employers who have taken advantage of the state mutual insurance feature of the law.

DUTIES OF PHYSICIANS UNDER THE COMPENSATION LAW

Let us now take up the different provisions of the workmen's law, which provide for the employment of physicians and surgeons, and relate to their compensation.

I have already noted that during the first three weeks after the injury, the employer is bound to furnish, or cause to be furnished, reasonable medical and hospital services and medicines, when they are needed (Section 4). This means that the employer may select the physician and must pay him. In case death ensues the total compensation for the injury and death is to be determined, exclusive of medical and hospital services and medicines furnished as above provided (Part 2, Section 12).

After an employee has given notice of an injury, and from time to time thereafter, during the continuance of his disability, the employee is required, if requested by the employer or the insurance company carrying the risk, or the commissioner of insurance, to submit himself to an examination by a physician or surgeon furnished and paid for by the employer, the insurance

company or the commissioner, as the case may be. The employee has the right to have a physician provided and paid for by himself present at the examination. If he refuses to submit himself for the examination, or in any way obstructs the same, his right to compensation is suspended, and his compensation during the period of suspension forfeited. Any physician who makes or is present at any such examination, may be required to testify under oath as to the results thereof (Part A, Section 19). Besides this, the industrial accident board or any member may appoint a duly qualified impartial physician to examine the injured employee and to report. The fee for this service under appointment from the board is $5 and traveling expenses, but the board may allow additional reasonable amounts in extraordinary cases. In fact, the fees and payment thereof of all physicians for service under the act, is subject to the approval of the industrial accident board (Part 3, Section 10).

The consequence to the workman of refusing to be examined by the physician of his employer are, as above noted, very serious, and may result in the suspension of his compensation. If an employee refuses to be examined by the physician of his employer, unless his own medical adviser is present, he is not held to refuse to submit himself to such examination, or obstruct the same. But this demand for the presence of the workman's personal medical adviser must be reasonable. When a workman makes demand when there are no special circumstances in the case calling for the presence of his medical attendant, his action may amount to refusal within the meaning of the act. "The purpose of the examination is a legitimate and proper purpose. It is that the employer may obtain from the man of skill an opinion as to the worman's then condition in order that he may consider whether he will be a party to a litigation, or will agree to give reasonable compensation without litigation to the man who has been injured."[23]

An attorney's office is not, under ordinary circumstances, a proper place in which to hold a medical examination. A refusal to undergo an examination except in the presence of one's attorney may amount to refusal to undergo an examination at all. This was the conclusion in a case where a workman, in receipt of compensation under the act, was required by his employers to submit himself for examination by a certain duly qualified medical practitioner, and the workman refused to do so unless the examination was held at the office of his attorney, or in the attorney's presence. The employers repeated the request, but stated that the medical adviser of the workman might attend the examination. His refusal to submit to the examination unless these conditions were complied with, was held a refusal to submit to examination within the meaning of the act.[24]

Cases also arise where a workman refuses to undergo an operation recommended by the physician appointed by his employer or by the board. It may be said generally that where a workman refuses to undergo a reasonable and safe operation, which will remove or relieve his incapacity, his continued inability to work at his trade is the result of his refusal of remedial treatment and not the result of the original accident. The employer in such a case has the burden of showing that the operation would have accomplished its purpose. The employee may justify his refusal to submit to such an operation on the ground that, in good faith, he followed the advice of his own doctor, whose honesty and competency are not impeached and this, although the balance of the medical testimony given at the hearing was to the effect that the operation was one which might reasonably and properly have been performed. The employer also has the burden of proof that the refusal of the workman was unreasonable.[25]

It is the holding in one of the cases that the unexpected death of the workman from the effect of an anesthetic administered in the course of treatment of an accidental injury was a death from accident. The test of the question whether death was caused by accident in such a case is whether the operation was a reasonable step to be taken to obviate the consequence of the accident.[26]

An injured workman is not to be deprived of compensation in all cases where his condition is in some measure due to defective treatment. Whether the condition of the workman is due to such defective treatment is usually a question of fact.[27]

None of these interpretations of the act, that I have quoted, have been made in Michigan; but are interpretations put on similar acts in other jurisdictions. It is reasonably to be supposed that our own board and court would follow these decisions.

23. Boyd, Section 556.

24. Boyd, Section 557.
25. Boyd, Section 448.
26. Boyd, Section 450.
27. Boyd, Section 464.

EXTRACTS FROM REPORTS TO THE MAYOR OF FLINT ON GARBAGE AND SEWAGE DISPOSAL IN GERMANY

C. B. BURR, M.D.
FLINT, MICH.

Until to-day I have had no opportunity to investigate the matter in which yourself and the commission on garbage and sewage disposal are interested. We came about as direct as possible to Munich, stopping for a day each in Antwerp and Rotterdam, then faring forth to Frankfurt. From there, the day following we found ourselves enroute to Munich, the, to me, most comfortable city in the world in which to live for a brief season away from home. There are the music, the art, the unconventionality, the hospitality, the altogether which go to make up that indefinable "Gemüthlichkeit" so frequently employed by those writing of this unique place. It may be justly said of Munich that here life is worth living.

For the past week many concert halls, the theaters and the opera house have been closed, because of the death of the Prince Regent of Bavaria. Certain ones opened Monday night. After the funeral services Thursday, at which the Kaiser, representatives from Austria, the King of Saxony (husband of the somewhat notorious Louise), the Infanta of Spain and other notables will be present, everything will be off in full swing. Then for the Christmas festivities and the January-February carnival. But I am far afield.

From all this sublimity it is a rather long step to garbage disposal, but we are all mortal and be we princes, potentates or plain people, shall all find our way eventually back to mother earth and be redistributed to the elements as are the contents of the garbage can.

Garbage disposal here does not offer as difficult a problem as at home. There is so much thrift, such economical housekeeping, little or no waste. If, perchance, there is anything destined for the garbage receptacle, the poorer people who have domestic animals or swine remove it and it is speedily transformed into good dog, cat or hog. A friend told me to-day that a saving housewife burned the thin potato peelings. As to other waste from vegetables, I dare say there is not a great deal from the average dwelling.

As to waste other than garbage, the disposal is ideal. It is placed in large cans—ashes, refuse, rags, old junk, glass, and indeed in small households refuse from the kitchen—and carted away daily or three times a week, to an establishment which I hope to visit, in the environs of Munich. There it is sorted. Rags are made over into paper; iron and metal reduced and remanufactured; glass melted and transformed into something useful. All is made of use. Bones are valuable, as everyone knows. It is said that from potato parings a drink for hogs is brewed. America has leagues and leagues to travel in the direction of small economies.

In the Deutsches Museum to-day I looked over charts and models showing garbage and sewage disposal of different cities. As to the former, that of Hamburg is, I should judge, nearest like that contemplated in Detroit and in use in some of the larger American cities. It would be well for the commission to obtain some data from Hamburg. Inasmuch as I shall not visit that city, it will be impracticable to give the result of personal observation.

As to sewage, that of Munich is carried direct into the Isar, a rapidly flowing river. Cross-sections of sewers, as shown in the museum, indicate that they are constructed of an excellent quality of pressed brick. They are of ovoid form, almost pear-shaped and the workmanship as displayed in the models is exquisite. You would be delighted with a cross-section of a street in Munich showing pavements, lamp-posts, hydrants, water mains, gas mains, conduits for telephone and electric lighting cables. Everything is so well laid out and so systematically done. Nothing seems to require changing or replacing. There is not an imperfect piece of paving in Munich so far as I have been able to discover. It is never permitted that a little hole shall grow larger through inattention. There are no breaks or bad joints into which water may settle and which constantly increase in size through the contact of vehicle wheels.

And as to the hygiene of the nervous system, it may be mentioned in passing that there is not a noisy street corner in the city. The rails are ground with an implement moved back and forth until they are as smooth as a well-made brass fitting. I haven't heard one single shriek. There is the (not disagreeable) rumbling sound, but no unearthly, Heaven-piercing shrieks like those of a lost soul, which may be heard any minute on the street corners of Detroit, shall I say? Or ————?

A sudden summons necessitated early departure from Munich and prevented acceptance of a gracious invitation obtained for me through the courtesy of Herr Reichsrat Panzer, chief of a department of sanitation, to visit the incinerating plant at Puchheim. Recent plans for canalization in Munich will, in three years, completely.

change the sewage disposal of that city. It is the intention, ultimately, to meet the problem after the Frankfurt plan hereafter described. Thanks to introduction from the American consul at Frankfurt and the courtesy of the director of the refuse-burning and sewage-clarification plant (Muellverbrennungs und Abwasserklaer-Anlage), I was accorded the opportunity to inspect this establishment, one of the finest, if not the very best, in Germany. Rarely have I spent a more interesting and instructive two hours.

The Frankfurt sewage clarification plant has been in use since 1887. It was remodeled and rebuilt in 1902-04. It provides for all Frankfurt, but the capacity is no longer adequate and an establishment on similar lines will soon be built in the eastern end of the city. All the sewage from Frankfurt is at present here received. Mechanically and automatically, rakes operate against the waterflow and lift the solid matter, which is scraped from the rakes and carried by a continuous belt to a centrifuge. From one chamber to another, the water flows. In one, an electrically-driven dredge is operated, which separates sand and heavy particles. Eventually, the partially clarified water reaches the clearing chambers proper. Of these there are fourteen, each 41 meters in length, 5.81 meters in width and 2.5 meters in depth (one meter equals 39 inches). There are regularly in use perhaps eight of these basins, others not in commission being subjected to a cleansing process. Water passes through these chambers in a continuous stream with a maximum speed of eight millimeters, approximately one-third of an inch, per second. The cleared water flows to the end of the basins over weirs and thence into a canal leading to the Main River. The major part of heavier matter not removed by the rakes and dredges is concentrated in the bottom of the basins. A small amount of superimposed water is sucked up through a float mechanism, the arrangement of which I do not perfectly understand. The lower sediment is removed by a vacuum pump. To receive the suction pipes of the latter, there are, in every basin, depressions into which, from all sides, the heavy contents fall. It is mentioned that this falling would be facilitated through lining the walls and bottom with glazed stone. The entire process of water clearing is mechanical, so that, with the exception of those who have to do with managing the apparatus, no laborers are needed.

There is, yearly, collected from the sewage in round numbers, 100,000 cubic meters of solid material. In a hundred parts of the organic suspended matter 22 parts are taken up through the sand catcher and the rakes, 56 in the basin, so that there remain in the overflow but 22 of the finest and smallest quality. Of this, 14 per cent. is not separable by mechanical means. The total reclaiming, therefore, is 78-86, or 91 per cent. The original plant cost 85,900 marks; its enlargement and rebuilding 980,000 marks. Translated into dollars, this is, altogether, in the neighborhood of $266,475. The yearly cost of operating is perhaps 150,000 marks, $37,000; one-half pfennig per cubic meter of sewage, or 40 pfennigs per head of population (forty pfennigs equal about 10 cents).

Previous to 1909 the refuse obtained from the sewage was returned to the land. Since this time, a much better method has been in use. It is dehydrated, dried and finally, in connection with refuse from houses, streets and stables, incinerated. The preliminary treatment of the recovered heavy matter, containing about 5 to 10 per cent. of dry substances, is pumped into holders and falls from these into centrifuges revolving at the rate of thirteen times a second. The centrifuged water runs through a fine sieve back into the clearing basin. The centrifuges periodically and automatically open and their contents, now dried to 40 per cent. of solid matter, fall out on a transporting band by which they are carried to a drying drum. Through this, a portion of the smoke and gases from the ovens at the refuse burning plant is conducted and further drying of the mass to 70 per cent. takes place. In this form the material, which has a considerable fat content, is destined to the fire. Out of the drying drum the material falls to the foot of an elevator which is connected, by a bridge, with the upper floor of the neighboring Muellverbrennungs Anstalt.

Formerly house refuse was conveyed to a dumping ground outside of the city, but this expensive, unsightly, wasteful and objectionable method so common in American cities, was eventually abandoned and that of the incineration adopted. Refuse, as garbage, street sweepings, manure, rags, paper, bottles, bones, iron and tinware reach the refuse burning plant. After being asepticized by heat, it is sifted and the more valuable portions carried on a movable stage. Along this carrier, at intervals, stand workmen or workwomen who take out, as the carrier passes, those particular articles in which they are interested — one rags and paper, another bones, another pieces of iron, another glassware, and so on. These accumulations are sold to contractors who dispose of them to factories where they are converted into articles utilitarian or artistic.

As heretofore mentioned, two institutions were projected, the one for the west half, the other for the east half of the city. That for the western half of the city (one here described) is built in the neighborhood of the clarification works in order that refuse and the solid ingredients of sewage may be burned together. There are no grates, the bottom of the boilers consisting of hollow perforated iron plates which are cooled from the air entering the combustion chambers. Air flows in concentrated streams toward the oven. In these ovens, the refuse of Frankfurt, including that from the sewage clearing basins, is burned, *without the addition of coal and with so high a temperature that there is not only complete combustion, but also development of heat for other purposes.*

Refuse is collected by the city in wagons carrying chests of peculiar construction. They are tightly closed and have on the sides little openings with trap doors through which the contents of the containers are emptied without the development of dust. By a windlass, the wagon chest may be placed in an oblique position, shoved to the side, or lifted. The wagons containing refuse may be driven direct to the incinerating plant or the chests conveyed thither in barges on the Main River. The refuse containers are lifted to the second story of the establishment and placed in an oblique position. When emptied, the container is automatically returned. After drying, ascepticizing, sorting, the debris reaches the oven.

Every half hour the slag, the refuse from burning, is removed. Finer ashes are sucked out from the chamber where they are deposited, drawn up under the steam boiler and eventually through a smoke canal into a 50 meters high chimney. The steam serves for dynamo driving. The establishment contains six batteries of ovens, six boilers with 125 square meters of heating surface and two turbo-dynamos of 260 kilowatts each; also a storage battery. Each of the oven batteries has capacity to burn in twenty-four hours from 30 to 35 tons of refuse. The temperature varies from 800 to 1,000 Celsius (F. 1472-1832). One ton of refuse creates from 800 to 1,000 kilograms of steam and develops 6,500 kilowatt hours, of which 57 kilowatt hours remain over and above the requirements of the establishment itself.

The heat value of the refuse is perhaps an eighth of that of coal. The electrical output is part direct, in part alternating. The direct current serves the Anstalt, the sewage clearing building and the centrifuge houses. It is also carried to the waterworks at Goldstein, two kilometers distant, and there used for driving pumps. There are yearly perhaps three million kilowatt hours developed, of which the Anstalt uses half a million, the sewage clarifying plant and the centrifuge houses (all on the same ground plat) one million, and the distant waterworks one million. The balance is conducted to the Frankfurt City electric light works. Slag drawn from the oven is used for filling purposes where concrete might be employed, and for street building. It is contemplated to build an establishment for making slag stone. I was shown a sample of this possible product. The building of the refuse burning plant has, up to this time, cost in the neighborhood of one and one quarter million marks, or $350,000.

I was favored with a copy of a guide to some of the public works of Frankfurt-on-the-Main, published by the city engineer's department. This came to me through the courtesy of the American consul in Frankfurt. That portion of it having to do with the cleansing of the city and its cost, accompanies this report.

Accompanying the report is a booklet in German, describing the refuse plant and sewage clarification plant, statistics as to the cost of collecting garbage in Munich, and also a photograph of a cross-section of a Munich street to which reference was made in a previous letter. This was procured for me through the kindness of Herr Oberingenieur Hirschmann of Munich.

Hoch the economies and thrift of Deutschland!

REPORT OF A CASE OF TRACHEOBRONCHOSCOPY FOR THE REMOVAL OF FOREIGN BODY

JOHN R. ROGERS, B.S., M.D.
GRAND RAPIDS, MICH.

Hazel H., aged 15, of Sunfield, Mich., on April 1, was holding a 2-inch belt pin in her mouth, when she was moved to laughter by a remark of one of her companions. Throwing back her head, and probably taking a deep inspiration, the pin disappeared from view somewhere into her bronchial or esophageal passages. After the first fright, induced by this occurrence and a mild paroxysm of coughing, she suffered no special discomfort. There was no dyspnea and there was no great inconvenience in swallowing except as might be accounted for by nervousness.

The case was first seen by Dr. Wm. Fuller, about April 4. At this time, owing to the absence of symptoms, it was thought that the pin had passed into the stomach and a radiograph was taken by Dr. J. D. Hastie, with a view of

discovering it in that location. In this picture the pin shows in the upper end of the plate (Fig. 1), with the point in the second interspace of the right vertebral line, the head in the fourth interspace to the left of the vertebral line.

A second plate, taken April 6, shows the point of the pin in the third interspace, the head down one-half inch to the left of the spine, opposite the sixth rib (Plate 1).

I first saw the case on the morning of April 7. At this time the girl was suffering no discomfort and physical signs were practically absent, beyond a possible roughness of breathing on the left side, noticeable only at the back, below the inferior angle of the scapula. At this time there was no difficulty in swallowing.

With practically an equal absence of signs and symptoms from either the respiratory or alimentary tract, there still remained a doubt as to the exact location of the foreign body, though perhaps the most likely position would be in the left bronchus with the point projecting into the trachea.

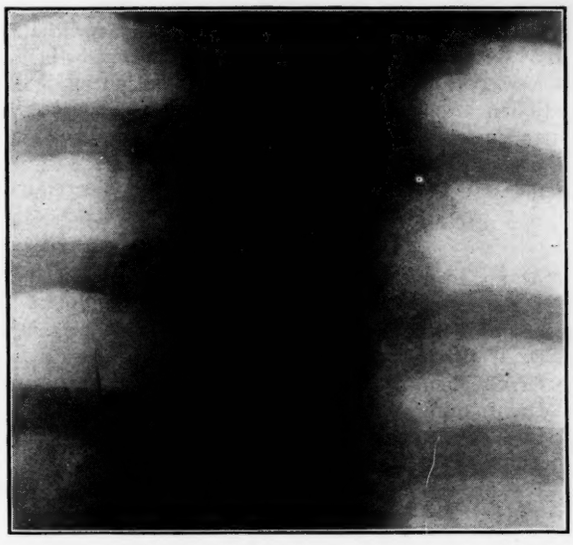


Plate 1.—Radiograph of the chest revealing the pin

Sunday, April 7, at 2 p. m., a tracheoscopy was performed, using the Chevalier Jackson bronchoscope, and though the tube was passed into both bronchi, the pin was not seen. It was then decided to explore the esophagus: the large esophagoscope was passed clear into the stomach, with a failure to locate the pin. The patient's condition at this time not being satisfactory, it was decided to desist in our efforts until a second radiograph could be taken.

Tuesday, April 10, this was done and the pin was located as in Plate 2. The point in the middle line opposite the fifth dorsal vertebra; the head in the sixth interspace, 1¼ inch to the left of the vertebral column.

This proved beyond a doubt that the foreign body was located in the bronchial tree; the head of the pin was probably in the ampulla of the left bronchus.

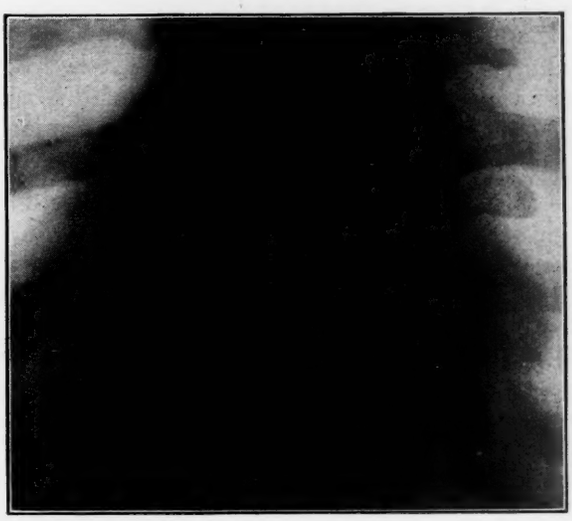


Plate 2.—Radiograph showing the change in location of the pin.

Saturday, April 13, the tracheoscope was again introduced. I was able to see the point of the pin soon after entering the left bronchus, but unfortunately the coughing reflex at this stage became so violent that I was unable to make an effort to remove it. A more violent paroxysm of coughing brought about one-half of the pin into view, and it then receded from sight. It then required considerable exploration before the new location of the pin could be found. By this time there was considerable edema of the bronchial mucous membrane, rendering exploration more difficult. When finally located, the handle of the 45 cm. tracheoscope was on the patient's cheek indicating the depth to which it had penetrated.

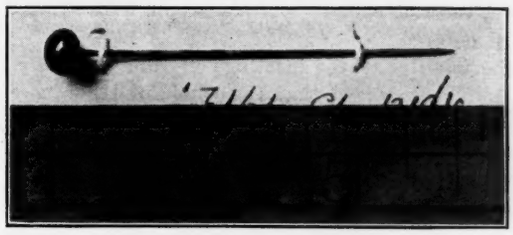


Plate 3.—The pin removed

The point of the pin having entered the tube, I introduced the forceps and withdrew the pin into the tube. The head of the pin was of sufficient size to completely occlude the distal end of the tube so that it became necessary to withdraw

the bronchoscope, the forceps and the pin at the same time.

The patient showed practically no ill effects from her unusual experience beyond a slight hoarseness for twenty-four hours following the bronchoscopy and was able to leave the hospital on April 16, two days after the operation.

I am indebted to Drs. William and Rowe Fuller, J. D. Hastie and J. M. DeKraker for their valuable aid in the management of the case and efficient assistance at the time of operation.

525 Metz Building.

Special Article

HERETOFORE UNPUBLISHED RECORDS OF THE MEDICAL SOCIETY OF THE TERRITORY OF MICHIGAN

EDITED BY
ALPHEUS F. JENNINGS, A.B., M.D.
DETROIT

(Continued from page 164, March, 1913)

CHAPTER VII—THE MEETINGS OF 1825

DETROIT, Jan. 11, 1825.

At an annual meeting of the Medical Society of Michigan, held this day agreeably to public notice, at the house of Benj. Woodworth, there were present:

Dr. William Brown, president.
Dr. Abraham Edwards, vice-president.
Dr. Stephen C. Henry, treasurer.
Dr. John L. Whiting, secretary.
Drs. Randall S. Rice, Marshall Chapin, Zina Pitcher, members.

The president called the Society to order. The roll was called, when it was found that Drs. Thompson, Hurd, Conant, Nichols and Hemenger were absent. Dr. Hurd entered.

The minutes of the meetings in June last were read, and it was resolved that the whole of the proceedings be spread upon the records of the Society, and the records be turned over to the president for the inspection and use of Dr. Hurd.

Dr. Cyrus Chipman and Dr. Daniel Goodwin presented their diplomas, the former from the Medical Society of the State of Vermont, and the latter from that of Connecticut, which were deemed satisfactory by the Society. Dr. Ezra L. Parke presented a diploma from the College of Physicians and Surgeons of the Western District of New York, which was read. He was then proposed by Dr. Whiting; ballotted for and unanimously admitted a member of this Society, on compliance with the requisitions of the By-Laws.

The Society then proceeded to the election of officers for the ensuing year, and upon counting the ballots the following persons were duly declared elected, to-wit:

Dr. William Brown, president.
Dr. Abraham Edwards, vice-president.
Dr. John L. Whiting, secretary.
Dr. S. C. Henry, treasurer.
Drs. William Thompson, S. C. Henry, Marshall Chapin, censors.

Dr. Whiting presented an account in favor of Benjamin Woodworth, amounting to four dollars and fifty cents, for refreshments, etc., furnished the Society at meeting in June last, and which Whiting has paid.

Resolved, That the amount be allowed and credited in Whiting's account.

Resolved, That the treasurer be authorized to purchase a book in which to keep his accounts. On motion,

Resolved, That a committee be appointed to examine and report whether any amendments of the statute of the territory regulating the practice of medicine and surgery are necessary; and if so, that they be instructed to draft a memorial in behalf of the Society to be presented to the Legislative Council at its next session, praying such a modification of the law as they shall deem expedient; and that the said committee be instructed to revise the existing By-Laws of the Society and make report of their doings at the next meeting. Drs. Henry, Pitcher and Whiting were appointed said committee. Dr. Rice rendered an excuse for non-attendance at the meetings of the Society for the last four years, which was accepted by the members.

Resolved, That when the Society adjourns it will adjourn to meet again on the first Monday in February next, at 6 o'clock p. m., at this place.

And the Society adjourned.

Attest: JOHN L. WHITING, Secretary.

DETROIT, Feb. 7, 1825.

At an adjourned meeting of the Medical Society of the Territory of Michigan, held this evening at the house of Benjamin Woodworth, there were present:

Dr. William Brown, president.
Dr. Stephen C. Henry, treasurer.
Dr. John L. Whiting, secretary.
Drs. Ebenezer Hurd, Zina Pitcher, Marshall Chapin, members.

The president took the chair, and called the Society to order. The roll was called when the following members were discovered to be absent, viz: Drs. Thompson, Rice, Conant, Nichols, Hemenger, Edwards and Parker.

The minutes of the meeting of January 11 were read and confirmed. Dr. Geo. W. Palms presented his diploma and certificate from the "College of Physicians and Surgeons of the Western District of New York," which were deemed satisfactory. He was then proposed by Dr. Chapin; ballotted for and admitted a member of this Society on his compliance with the requisition of the by-laws.

The committee appointed, at the annual meeting of the Society in January last, "to examine and report whether any amendments of the statute of the territory regulating the practice of medicine and surgery are necessary, etc.," made their report, which, after having been discussed and amended, was adopted (see report on file), with such verbal alterations in the articles proposed as may be necessary to adopt them to the circumstances of Michigan. On motion of Dr. Z. Pitcher it was

Resolved, That the Society's attorney be instructed to draft a memorial in behalf of the Society, praying of the Legislative Council of the territory, such amendments of the Statute Regulating the Practice of Physic and Surgery as the Society shall direct. Also, an amendment to the Statute regulating the issuing and

returning of writs of "Quo Warrants" and of "Mandamus" as shall enable the territorial Society to prevent the formation of illegally constituted medical societies; and that the committee hitherto appointed for that purpose, be instructed to present the same to the legislative authority of the territory at their adjourned session in March next.

Resolved, That a committee of three be appointed to select a system of medical ethics, from the one adopted by the State Medical Society of New York, or from the system of Percival, or any others, and report to the society at the next meeting. Drs. Henry, Pitcher and Whiting were appointed on the committee.

Dr. Cyrus Chipman of the County of Oakland was proposed by Dr. Whiting as an honorary member of this Society, and on being ballotted for, was unanimously elected. Dr. William Beaumont, of the United States Army, was proposed by Dr. Pitcher, and unanimously elected by ballot.

Resolved, That the secretary be instructed to inform the above named gentlemen of their election as honorary members of this Society.

Dr. William Kittridge, a licentiate of the "Massachusetts Medical Society," presented his diploma, which was approved by the Society. He afterwards made application to be admitted to membership, and on being ballotted for was admitted on compliance with the requisitions of the by-laws.

Resolved, That the secretary be authorized to procure the publication of the names of the officers of the Society, together with those of the honorary members, in the *Detroit Gazette*.

And the Society adjourned.

Attest: JOHN L. WHITING, Secretary.

DETROIT, June 1, 1825.

Dr. Ezra S. Parke has this day given notice that Lorenzo D. Webster has commenced reading physic and surgery with him, the said Parke; which notice is on file at my office.

JOHN L. WHITING, Secretary, M. S. M.

DETROIT, June 14, 1825.

At a semi-annual meeting of the Medical Society of Michigan, held this day at the house of Benjamin Woodworth, there were present:

Dr. William Brown, president.

Dr. John L. Whiting, secretary.

Dr. Stephen C. Henry, treasurer.

Drs. Ebenezer Hurd, Marshall Chapin, members.

The president took the chair and called the Society to order. The roll was called when it was found that the following members were absent. To-wit: Drs. Rice, Thompson, Conant, Nichols, Hemenger, Edwards, Pitcher, Parke and Kittridge.

The minutes of the meeting in January and the adjourned meeting in February last, were read and approved. A letter from Dr. E. S. Parke, giving notice that Mr. L. B. Webster had, on the first instant, commenced reading medicine and surgery with him, was read by the Secretary as well as the filing of said notice.

The committee appointed at the meeting in February last, to select a system of "Medical Ethics," made their report, which was read and on motion was ordered to lie over for the consideration of the Society, till their annual meeting in January next. A letter from Dr. William Beaumont of the U. S. Army, acknowledging with sentiments of gratification the information of his election as an honorary member of this Society, was read and directed to be filed with the secretary.

And the Society adjourned.

Attest: JOHN L. WHITING, Secretary.

CHAPTER VIII—THE MEETINGS OF 1826

DETROIT, Jan. 10, 1826.

At an annual meeting of the Medical Society of Michigan, held this day at the house of Benj. Woodworth, there were present:

Dr. A. Edwards, vice-president, presiding.

Dr. J. L. Whiting, secretary.

Dr. S. C. Henry, treasurer.

Drs. M. Chapin and Wm. Kittridge, members.

The presiding officer called the Society to order.

The roll was called, when it was found that the following members were absent, to-wit: Drs. Brown, Hurd, Rice, Thompson, Conant, Nichols, Hemenger, Pitcher and Parke.

The minutes of the last meeting were read and approved. Dr. David E. Lord, a licentiate from the County of Onondaga, New York, was proposed as a member of this Society, and on being ballotted for was unanimously admitted, on compliance with the requisition of the by-laws.

Dr. Justin Rice was also proposed, ballotted for and admitted unanimously. Dr. Ezekiel Webb was also unanimously admitted as above. Dr. Henry Bradley was also admitted after being ballotted for. Dr. Ephraim Adams was also proposed and unanimously admitted.

The Society then proceeded to the election of officers for the ensuing year; when on counting the ballots it appeared that the following gentlemen were elected to the offices set opposite to their names respectively, viz.:

Dr. William Thompson, president.

Dr. Abraham Edwards, vice-president.

Dr. John L. Whiting, secretary.

Dr. Stephen C. Henry, treasurer.

Drs. S. C. Henry, M. Chapin and J. L. Whiting, censors.

Drs. Whiting and Kittridge each offered excuses for their non-attendance at previous meetings of the Society, which were accepted, and the fines imposed were remitted.

Resolved, That Dr. I. Rice, Dr. Chapin and Dr. Lord be a committee to investigate the subject of arrearages due the Society, and report at the next meeting.

The system of "Medical Ethics," reported at the meeting in June last, and then laid over for further consideration, was again taken up, and after discussion, unanimously adopted.

Resolved, That the secretary be authorized to contract for the printing of fifty copies of the system of "Medical Ethics" adopted as above, provided the expense shall not exceed the sum of fifteen dollars.

A paper presented to the Society, purporting to be a copy of a diploma granted by the Medical Society of Vermont, to John Willson, was read, and, on motion, the consideration of it was indefinitely postponed.

Resolved, That a committee of three be appointed, whose duty it shall be to report any, and if any, what alterations are necessary, in the statutes of the territory, regulating the practice of physic and surgery; and that they make report at the next meeting of the

Society in June next; and Drs. Chapin, Justin, Rice and Webb were appointed said committee.

And the Society adjourned.

Attest: JOHN L. WHITING, Secretary.

The following resolution passed at the meeting of the Society on Jan. 10, 1826, was omitted through mistake in transcribing the minutes of that meeting.

J. L. WHITING, Secretary.

May 2, 1826. Joseph V. D. Sulphur, M.D., of Port Lawrence, this day presented his diploma from the Medical College of Vermont, together with a certificate of membership from the College of Physicians and Surgeons of the Western District of New York.

J. L. WHITING, Secretary.

Resolved, That the 17th article of the By-Laws of this Society be so altered as to make it compulsory on each member, to communicate what have been the prevailing diseases in the circuit of his practice, and the most successful mode of treating them. And for a failure to comply with this requisition, each delinquent shall pay to the treasurer the sum of five dollars.

DETROIT, June 13, 1826.

At a semi-annual meeting of the Medical Society of Michigan, held this day at the house of B. Woodworth, there were present:

Dr. S. C. Henry, treasurer.
Dr. J. L. Whiting, secretary.
Dr. M. Chapin.
Dr. E. Hurd.
Dr. W. Kittridge.
Dr. I. Rice.

The president and vice-president being both absent, Dr. S. C. Henry was appointed president *pro tempore*, and called the Society to order. The roll was called, when it was found that the following members were absent, to-wit: Drs. Brown, R. S. Rice, W. Thompson, Conant, Nichols, Hemenger, Edwards, Pitcher, Parke, Lord, Webb, Bradley and Adams. The minutes of the meeting of the Society in January last were read and confirmed. The secretary presented an account from Chipman and Seymour, amounting to seven dollars, for printing fifty copies of "System of Medical Ethics," which was allowed and ordered to be paid by the treasurer.

Dr. Thaddius Thompson, a licentiate from the Medical Society of the County of Broome, N. Y., presented his diploma, which was considered satisfactory. He was then proposed, ballotted for and unanimously admitted a member of this Society. Dr. Lyman T. Jenney presented a diploma from the University of Vermont, which was deemed satisfactory. He was then proposed, ballotted for and unanimously admitted a member of the Society. Dr. Thomas B. Clarke presented a certificate of membership from the Medical Society of the City of New York, together with a certificate from the Professors in the College of Physicians and Surgeons in the City of New York. He was then proposed and unanimously admitted a member of this Society.

Sundry testimonials touching the qualifications and moral character of Joseph V. D. Sulphus, M.D., were presented and found satisfactory by the Society. He was then proposed, ballotted for, and unanimously admitted. A diploma from the Medical Society of the County of Greene, New York, to Dr. W. H. Provost, was presented, read and filed with the secretary. Dr. Rufus Pomeroy presented a diploma from the president of the Medical Society of the County of Herkimer, N. Y., which was considered sufficient. He was therefore ballotted for, and admitted.

The committee appointed at the last meeting of the Society to report whether any, and if any, what alterations are necessary in the statutes of the territory regulating the practice of Medicine and Surgery, submitted the result of their deliberations, which was read by the secretary and adopted. (See report on file.)

Resolved, That a committee of three members be appointed whose duty it shall be to copy the report this day submitted, and the advice and assistance of the Society's attorney for this purpose is necessary; and when so copied in proper form, that they present the same to the Chairman of the Judiciary Committee at the next meeting of the Legislative Council of the territory, in order that it may be passed into a law. And Drs. Clarke, Rice and Hurd were appointed said committee.

The committee appointed at the last meeting to investigate the subject of arrearages due the Society made the following report, which was adopted: "The committee appointed to investigate the subject of arrearages due the Society and report thereon, beg leave to report, that they deem it expedient to remit all fines and impositions due the Society from its members, except for admission fees, which are in all cases to be paid."

JUSTIN RICE,
M. CHAPIN,
Committee.

And the Society adjourned.

Attest: JOHN L. WHITING, Secretary.

June 30, 1826. John Hendrie, M.D., this day presented diploma from the president and professors of the University of Pennsylvania, and other documents, to the secretary of the Medical Society of Michigan.

August 5, 1826. Sterling W. Allen this day presented a copy of a diploma from the Medical Society of the County of Herkimer, New York, which was filed in my office.

J. L. WHITING, Secretary.

DETROIT, Nov. 17, 1826.

This day Hubbel Loomis presented a copy of a diploma from the Medical Socieety of the County of Herkimer, New York, which was filed in my office.

J. L. WHITING, Secretary.

CHAPTER IX—THE MEETINGS OF 1827

DETROIT, Jan. 9, 1827.

At an annual meeting of the Medical Society of Michigan held this day at the house of Benj. Woodworth, were present:

Dr. William Thompson, president.
Dr. S. C. Henry, treasurer.
Dr. J. L. Whiting, secretary.
Dr. R. S. Rice.
Dr. M. Chapin.
Dr. J. Rice.
Dr. E. S. Parke.
Dr. E. Webb.
Dr. T. Thompson.
Dr. L. T. Jenny.

The president declared a quorum present, and called the Society to order. The roll was called, when it was found that the following members were absent, to-wit: Drs. Brown, Hurd, Conant, Nichols, Hemenger, Edwards, Pitcher, Kittridge, Lord, Bradley, Adams and L. B. Parke.

Dr. Orville Morrison presented a paper purporting to be a diploma from the Medical Society of Bennington County, Vermont, and also a certificate of membership from the Medical Society of Oswego Co., N. Y. He was then proposed, ballotted for, and was not admitted. Ayes, 3; Noes, 6; Blank 1. On motion

Resolved, That the vote upon the admission of Dr. Morrison be reconsidered.

Dr. Hubbel Loomis presented a diploma from the Medical Society of the County of Herkimer, N. Y. He was then proposed, baliotted for and unanimously admitted a member, and paid five dollars to the treasurer.

John Hendrie, M.D., presented a diploma from the University of Pennsylvania. He was then proposed, ballotted for and unanimously admitted a member of the Society.

Dr. J. Rice presented a diploma granted by the Medical Society of the County of Delaware, N. Y., to Dr. Robert Clark, which was read. Dr. Clark was then proposed, ballotted for and admitted on compliance of the by-laws.

The Society then proceeded to the election of officers for the ensuing year, when on counting the ballots, it appeared that the following gentlemen were elected to the several offices set opposite their respective names, to-wit:

Dr. Stephen C. Henry, president.
Dr. Abraham Edwards, vice-president.
Dr. John L. Whiting, secretary.
Dr. Marshal Chapin, treasurer.
Drs. M. Chapin, John Hendrie, and J. L. Whiting, censors.

The late treasurer made his report, which was accepted by the Society.

Resolved, That the by-laws be so amended as that immediately after the examination of students "the president shall deliver his address."

Sheldon & Ried's account for advertising notice of meetings, etc., from May, 1820, to December, 1824, amounting to $13.60, was read, allowed and ordered to be paid by the treasurer.

Dr. J. L. Whiting being called on to furnish a description of some case in his practice during the past year, reported a case of Puerpural Fever, cured by the administration of olium turbinth and ol. ricini.

Dr. Henry reported the general treatment prescribed by him in the past year, in febrile diseases.

On motion of Dr. Hendrie,

Resolved, That, that part of the 17th Article of the By-Laws, which requires the members, annually to communicate the prevailing diseases during the preceding year, etc., be expurged.

The following resolutions were then adopted, viz:

Resolved, That the members of this Society be requested to communicate in writing to the Society at each future meeting, such diseases as have prevailed within the sphere of their practice, and what treatment has proved most successful.

Resolved, That the fact of said communication having been made, be entered on the records of the Society, and the papers deposited in its Archives, as the property of said Society.

Resolved, That Dr. R. S. Rice be added to the committee heretofore appointed to procure amendments to the laws regulating the practice of Physic and Surgery.

And the Society adjourned.

Attest: JOHN L. WHITING, Secretary.

DETROIT, June 12, 1827.

At a semi-annual meeting of the Medical Society of Michigan, held this day at Schwartz Mansion House, there were present:

Dr. S. C. Henry, president.
Dr. J. L. Whiting, secretary.
Drs. R. S. Rice, M. Chapin, and T. B. Clarke, members.

The president declared a quorum present, and called the Society to order. The roll was called, when it was found that the following members were absent, viz: Drs. Brown, Hurd, W. Thompson, H. Conant, Nichols, Hemenger, Edwards, Pitcher, Parke, Kittridge, Lord, J. Rice, Webb, Bradley, Adams, Thad Thompson, Jenny, Loomis, Hendrie and R. Clarke.

The minutes of the last meeting were read and confirmed. Dr. T. B. Clark rendered an excuse for non-attendance at the last meeting which was accepted.

A letter, communicating a request from several members of the Society, residing in the County of Washtenaw for permission to form a County Society in that county, was read. Whereupon

Resolved, That Drs. Cyril Nichols, Rufus Pomeroy, William Kittridge and David E. Lord, the persons named in the above mentioned letter, be and they are hereby authorized to form a County Medical Society in the County of Washtenaw, and that the secretary give the petitioners notice of this resolution.

Dr. John Truax presented a diploma from the Medical Society of the State of New York, which was deemed satisfactory by the Society. He was then proposed, ballotted for, and unanimously admitted a member.

A diploma from the University of Vermont, granted to Warren Bell Sargent, M.D., was presented, examined by the Society and deemed satisfactory by the Society.

Dr. Truax signed the by-laws, and paid five dollars to the treasurer.

And the Society adjourned.

Attest: JOHN L. WHITING, Secretary.

CHAPTER X—THE MEETINGS OF 1828

DETROIT, Jan. 8, 1828.

At an annual meeting of the Medical Society of the Territory of Michigan held this day at Schwartz's Mansion House, were present:

Dr. S. C. Henry, president.
Dr. J. L. Whiting, secretary.
Dr. M. Chapin, treasurer.
Drs. R. S. Rice, T. B. Clark, L. T. Jenny and Jno. Truax, members.

The president declared a quorum present and called the Society to order. The minutes of the semi-annual meeting in June last were read and confirmed. Dr. Dennis Cooley presented a diploma from the Medical Society of the State of Massachusetts, which on examination by the Society, was deemed satisfactory. He was then proposed, ballotted for, and unanimously admitted.

Dr. Stirling W. Allen presented a diploma from the County of Madison in the State of New York. He was then proposed, ballotted for and unanimously admitted.

DR. BEAUMONT REPORTS A CASE

A letter dated August, 1827, from Dr. William Beaumont, of the U. S. Army, an honorary member of this Society, accompanied by a report of an interesting case of wounded stomach, which occurred in his practice together with some experiments on the digestive powers of the stomach was read, whereupon on motion of Dr. R. S. Rice,

Resolved, That the thanks of the Society be transmitted by the Secretary to Dr. Beaumont, for the able luminous report of a case of wounded stomach, and the experiment on digestion forwarded by him to this Society, and read at its annual meeting in January, 1828.

The president, Dr. S. C. Henry, read to the Society an essay on Digestion.

Dr. J. Rice entered. The Society then proceeded to the election of officers for the ensuing year, when on counting the ballot, it appeared that the following gentlemen were elected to the offices set opposite their respective names:

Dr. S. C. Henry, president.
Dr. J. L. Whiting, vice-president.
Dr. R. S. Rice, secretary.
Dr. M. Chapin, treasurer.
Drs. R. S. Rice, J. Hendrie and J. L. Whiting, censors.

Resolved, That the secretary procure for the use of the Society as soon as printed, fifty copies of the laws regulating the practice of Physic and Surgery in this territory, and when so procured that he deliver a copy to each member.

And the Society adjourned.

R. S. RICE, Secretary.

MT. CLEMENS.

April 23, 1828: Dr. George Lee, Jr., deposited a copy of his diploma granted by the Medical Society in the County of Monroe in the State of New York, and on the second day of May, 1828, was found legally qualified by the censors to practice Physic and Surgery in this Territory, and accordingly a license was granted him signed by the President and Secretary under Seal of the Society.

R. S. RICE, Secretary.

TECUMSEH.

June 5, 1828: Dr. Michael A. Patterson presented his diploma obtained from the Medical Society of the County of Niagara in the State of New York, which being examined by the Censors was deemed satisfactory, and upon the certificate of said Censors, a diploma was granted to the said M. A. Patterson under the Seal of the Society to qualify him to practice in this Territory according to Law.

Also a copy of said diploma was filed on the above date.

R. S. RICE, Secretary.

At the semi-annual meeting of the Medical Society of the Territory of Michigan, held at the Mansion House, in the city of Detroit, on Tuesday, the tenth day of June, A. D., 1828.

The President called the Society to order and declared a quorum present. The Roll was called and all the members found absent except the following, viz:

Dr. S. C. Henry, President.
Dr. R. S. Rice, Secretary.
Drs. M. Chapin, J. Hendrie, members.

The minutes of the last meeting were read, and on motion of Dr. Chapin the Society adjourned to Tuesday the twenty-fourth day of June, present at 10 o'clock a. m.

Adjourned Sine die.

R. S. RICE, Secretary.

June 30, 1828: Dr Bradley Bunnel presented his diploma obtained from the Medical Society of the County of Orleans in the State of New York which was examined by the Censors and deem d satisfactory.

Whereupon a diploma was granted to said Bunnel under Seal of the Society of this Territory and according to the Laws regulating the practice of Physic and Surgery in the same.

R. S. RICE, Secretary.

CHAPTER XI—THE MEETINGS OF 1829

At a meeting of the Medical Society of the Territory of Michigan held at the Mansion House in the City of Detroit on Tuesday the thirteenth day of January, 1829; present:

J. L. Whiting, Vice-President.
R. S. Rice, Secretary.
M. Chapin, Treasurer.
J. Rice, H. Loomis, members.

The Vice-President called the Society to order and declared a quorum present. The Roll was called and the following members were found to be absent, viz: S. Henry, Brown, Conant, Hurd, Thompson, Nichols, Hemenger, Edwards, Pitcher, Parke, Kittridge, Lord, Webb, Bradley, Adams, T. Thompson, Jenny, Clarke, Hendrie, Truax, Allen, Cooley.

The Society then proceeded to the election of officers for the ensuing year, and on counting the ballots the following gentlemen were elected to the offices set opposite their respective names:

Dr. S. C. Henry, President.
Dr. J. L. Whiting, Vice-President.
Dr. R. S. Rice, Secretary.
Dr. M. Chapin, Treasurer.
Drs. R. S. Rice, M. Chapin, J. Rice, Censors.

The Treasurer being called on to make his report of the state of funds, stated to the Society that no alteration had taken place subsequent to the last report and therefore had not prepared a statement.

The excuse was deemed satisfactory.

Dr. C. McCollum presented his license authorizing him to practice Physic and Surgery, granted by the Medical Society of the County of Herkimer in the State of New York, which was deemed satisfactory, and on motion of Dr. J. Rice he was ballotted for, and unanimously admitted a member.

On motion of Dr. J. Rice:

Resolved, That the Treasurer, be, and is hereby authorized and directed to collect all fees due the Society for admission previous to the next meeting of the same.

On motion of Dr. R. S. Rice:

Resolved, That a Committee of three members be appointed to revise the by-laws of the Society, and report at the semi-annual meeting in June next.

And Drs. M. Chapin, J. Rice and R. S. Rice were nominated by the President to compose said Committee.

On motion of Dr. J. Rice the Society adjourned .

Attest: R. S. RICE, Secretary.

March 3, 1829.

Dr. David Ward presented his diploma from the Medical Society of the County of Essex in the State of New York, which together with other vouchers were deemed satisfactory by the Censors. Whereon a license was granted to said Ward under Seal, signed by said Censors, the President and Secretary of the Society, and a copy of said diploma was filed pursuant to the Statute.

March 14, 1829: Dr. Perrin Barker presented satisfactory testimony to the Censors of his having studied Physics and Surgery for the time and in the manner prescribed by Law, and was therefore licensed to practice in this Territory.

Attest: R. S. RICE, Secretary.

April 22, 1829: Dr. Charles William Brandt presented satisfactory testimony to the Censors of his having studied Physic and Surgery for the time and in the manner prescribed by Law, and was therefore licensed to practice in this Territory.

Attest: R. S. RICE, Secretary.

May 21, 1829: Dr. Andrew Hays presented satisfactory testimony to the Censors of his having studied Physic and Surgery for the time and in the manner prescribed by law, and was therefore licensed to practice in this Territory.

Attest: R. S. RICE, Secretary.

At a meeting of the Medical Society of the Territory of Michigan held at the Mansion House in the City of Detroit on Tuesday the tenth day of June, A D., 1829.

Were present:

Dr. S. C. Henry, President.

Dr. R. S. Rice, Secretary.

Dr. M. Chapin, Treasurer.

Dr. J. Rice, Member.

The President called the Society to order and declared a quorum present, whereon the Roll was called and all the members found absent, except those above mentioned, the minutes of the last meeting were then read and on motion the Society adjourned.

Attest: R. S. RICE, Secretary.

Oct. 23, 1829: Dr. Isaac Wixon presented satisfactory testimony to the Censors that he had studied Physic and Surgery for the time and in the manner prescribed by Law, and that he was regularly licensed by the Medical Society of Bates County of New York, and was therefore licensed to practice in this Territory.

Attest: R. S. RICE, Secretary.

October: Dr. David L. Porter presented satisfactory testimony, to the censors, that he had studied Physic and Surgery for the time, and in the manner prescribed by law, and exhibited a diploma from the Medical College in Burlington, Vermont, as a graduate of the same, and therefore licensed to practice in this Territory.

Attest: R. S. RICE, Secretary.

(To be continued)

PUERPERAL ECLAMPSIA

Don't delay terminating the pregnancy after the onset of the first convulsion. The earlier the uterus is evacuated, the lower the maternal and infant mortality.

Don't treat the patient haphazardly, as the mortality and morbidity are exceedingly high under such conditions. Endeavor to choose the right method of operation in the first instance.

Don't give chloroform or nitrous oxid, as they both cause acidosis. Ether, while not free from objection, is the least harmful; but its administration should be restricted to the time of intervention.

Don't forcibly dilate an intact or rigid cervix. It is irrational and unjustifiable. Bear in mind the physiologic and anatomic changes necessary to soften and unfold the cervix, and dilate the external os. The divulsion of the cervix in a few minutes by instrumental or manual methods—what Nature takes, under normal conditions, hours to do to preserve the integrity of the soft parts—is unscientific, dangerous and brutal. It is in this class of cases that the cutting operations, when done primarily, give such excellent results. Vaginal hysterotomy is the operation of election up to the eighth month, and the abdominal cesarean section after that time; particularly when the child is of average size or has a weak fetal heart-beat, in cases of corpulency or when the cervix is high, in posterior positions.

If these "dont's" be universally observed we will see a great reduction in the mortality and morbidity of eclampsia.—Moran, *Surg. Gynec. and Obst.*

G. W. Crile of Cleveland, in Keen's *Surgery*, Vol VI, p. 158, which has just been issued, gives this technic for his anoci-association: "The patient is anesthetized as usual, but the entire line of incisions is carefully blocked with novocain, including the peritoneum. If then, at the end of the operation and before the peritoneum is closed, there is applied around the entire line of stitches a complete anesthetic block that will last a number of days, such as 50 per cent. alcohol or quinin and urea hydrochlorate, and if in stitching the peritoneum every stitch is placed within this blocked zone, then the afferent impulses caused by stitch irritation are blocked, and hence cannot excite this protective mechanism of intestinal inhibition.

"On trial of this method it was found that such blocking does minimize or even prevent postoperative gas pains in all sorts of abdominal operations. The principle here enunciated has been more or less tested in a series of over 2,000 by myself. In the last 1,000 the death-rate has fallen to 1.8 per cent."

Chetwood of the New York Polyclinic Hospital, in his new work on *Urology*, p. 781, says regarding the use of salvarsan in syphilis: "One dose of salvarsan has demonstrated indisputably its influence in overcoming and controlling the symptoms during the most active early stage, and of causing a cessation thereof for periods of varying duration. A single dose has demonstrated its ability to remove promptly the obstinate chronic lesions on the skin and mucous membranes, and to cause enlargements of the organs and the bones to disappear in a short period. . . . It may, therefore, be reasonably stated that one dose of salvarsan is the equivalent of several months of mercurial treatment."

The JOURNAL
of the
Michigan State Medical Society
ISSUED MONTHLY UNDER THE DIRECTION OF THE COUNCIL

PUBLICATION COMMITTEE
Andrew P. Biddle, chairman.....Detroit.
W. J. Kay.....Lapeer.
W. J. DuBois.....Grand Rapids.
A. M. Hume.....Owosso.

EDITOR
FREDERICK C. WARNSHUIS
Grand Rapids, Mich.

EDITORIAL COLLABORATORS

J. V. White.....	Detroit	1st District
George R. Pray.....	Jackson	2d District
C. S. Gorsline.....	Battle Creek	3d District
C. E. Boys.....	Kalamazoo	4th District
T. De Witt Gordon.....	Grand Rapids	5th District
C. B. Burr.....	Flint	6th District
Daniel Conboy	Bad Axe	7th District
B. B. Rowe.....	Saginaw	8th District
Robert E. Wells.....	Traverse City	9th District
F. E. Ruggles.....	Bay City	10th District
V. A. Chapman.....	Muskegon	11th District
E. H. Webster.....	Sault Ste. Marie.....	12th District
C. M. Williams.....	Alpena	13th District
Reuben Peterson	Ann Arbor	14th District

All communications relative to exchanges, books for review, manuscripts, news, advertising and subscriptions are to be addressed to Frederick C. Warnshuis, M.D., 91 Monroe Ave., Grand Rapids, Mich.

The Society does not hold itself responsible for opinions expressed in original papers, discussions, communications or advertisements.

Subscription Price—$2.00 per year, in advance.

APRIL

Editorials

ANTITYPHOID INOCULATIONS

We have every reason to be proud of the record established by the Medical Corps of the United States Army in the prevention of typhoid fever. Ours is the only army in the world in which the use of antityphoid vaccine is made compulsory for every soldier under 45 years of age. The three inoculations used in our army insure a greater and more lasting immunity than do the two injections used in other countries. Major F. F. Russell, in a lecture before the Harvey Society in New York, Feb. 8, 1913, says, "The immunity which three injections of the antityphoid vaccine now in use confers is equal to and identical with that conferred by an attack of the disease, and it can be obtained without danger and practically without the likelihood of distressing symptoms of reaction." The following statistics, given by Major Russell, show its success: In 1898, in ten thousand troops stationed at Jacksonville, there were over one thousand cases of typhoid, and 87 per cent. of the total deaths were due to typhoid. In 1911, in the army stationed in Texas—with antityphoid inoculation in general use—there were only two cases of typhoid fever and no mortality. In 1912, there were only fifteen cases of typhoid in the whole standing army of 58,000 men with only two deaths. Only one of these fifteen had received the three protective inoculations.

In the light of these results, antityphoid vaccine should be more extensively used in civil life to protect physicians, nurses and others serving in hospitals where typhoid cases are admitted and to immunize the remaining members of a family in which typhoid fever has appeared. In view of the fact that in several epidemics the infection has been carried by milk it has been very aptly suggested that all those handling milk, supplied particularly to large centers, be required to receive protective inoculations.

The most encouraging results yet obtained in the treatment of typhoid bacillus carriers have been through the use of vaccines combined with *x*-ray exposures in gall-bladder cases and hexamethylenamin in urinary cases.

Experimentally, it has been shown that no production of opsonins and agglutinins occur for from five to eleven days after the first injection; from that time on to the twenty-fifth day there is a very rapid production of antibodies. In the treatment of typhoid, the immunity reaction has already been started by the existing infection and the response is somewhat more prompt. Thus far vaccines have been used in five hundred or more reported cases and it is the general opinion that when used early and given in sufficient doses the course of the disease is shortened; the symptoms are less severe; the death-rate is lowered, and there are fewer complications and relapses. T. D. G.

THE USE OF OIL OF ORANGE IN ANESTHESIA

When the ether, employed in anesthesia, is combined with the oil of orange the patient may be anesthetized with less discomfort, with no preliminary stage of excitement and with the consumption of about one-half the quantity of ether that is otherwise required; there is also a speedy recovery from the anesthetic state, without nausea or vomiting.

This was shown by Gwathmey[1] several years ago. In a recent publication we note that Jarvis,[2] after certain experiments, concludes: (1) That essential oil of orange enhibits nasal

1. Jour. Am. Med. Assn., Dec. 17, 1901.
2. Month. Cycl. and Med. Bull., January, 1913.

reflexes, elicited by ether alone; (2) the inhalation of the oil of orange previous to the inhalation of ether (for three minutes) suppresses the reflexes of dilatation of the lungs and stomach that is produced by ether vapor.

The technic of the administration is to allow the patient to inhale the oil of orange from the ordinary mask for a period averaging about three minutes before the commencement of the administration of the ether. When the ether vapor is commenced it is combined with the oil of orange vapor in the proportion of one ounce of the essential oil and one ounce of water contained in a separate bottle that is connected with the ether vaporizer.

If the above results are thus obtainable—and we have no reason to believe otherwise—it becomes essential that every person administering ether as an anesthetic should employ this adjuvant. Every method that has a worthy claim to being an agent that will enhance or reduce to a minimum the dangers that are connected with the production of the anesthetic state should be employed on every occasion where ether is exhibited as the drug of choice. Even though ether is conceded by the majority as being the safest anesthetic, it is our bounden duty to render it more safe if we can possibly do so.

We would recommend that Gwathmey's suggestion:[3] (1) The preliminary administration of morphin and atropin or some similar drug or combination; (2) commencing the anesthesia with two to four drops of the essence of orange (25 per cent., U. S. P.); (3) the drop method of anesthol until the patient reaches surgical anesthesia, and then a change to the drop method of ether; (4) replacing the drop method of ether by some form of "vapor anesthesia"; be used by those who are employing ether as their anesthetic agent of choice.

THE GLASNER BILL

Practicability and applicability are desired — yes, admired and encouraged—but idealism must not be lost sight of or ignored. The Glasner bill is an educative measure, conducive to public health betterment and race improvement, and is a movement in the direction that leads to the attainment of higher and greater perfection of our communal life.

The bill has passed the House and it is to be hoped that its reception by the Senate will result in its becoming a law. While we may already have too many laws that serve to no other purpose than to occupy a certain number of pages in our statute books, the Glasner bill—apparently considered by some to be a piece of ideal legislation and its enforcement a questionable problem—is a commendable law. If it accomplishes nothing more than to awaken the public interest in the problems of preventative medicine, a good work will have been instituted.

More and better results are, however, anticipated from this legislative measure, and as its intent and purpose become more apparent to the mothers and fathers of our commonwealth, the rigid enforcement of this law will be demanded and secured. These enlightened citizens will then also demand the enactment of certain amendments which will prevent the evasion of the law by those who are physically unsound or mentally deficient.

It required twenty-five years' time in which to educate the public as to the necessity of preventative measures in the treatment and eradication of tuberculosis. It is hoped that a similar length of time will not be required to make them realize the necessity of legislation as an agent for the betterment of the coming generations.

3. Jour. Am. Med. Assn., Nov. 23, 1912.

DR. WILFRID HAUGHEY

Dr. Wilfrid Haughey, retired as secretary-editor of the Michigan State Medical Society at the January meeting of the Council. It is but proper and befitting that a permanent record should be made of his services to the state organization and the society's appreciation be thus recorded.

Dr. Haughey was born in Kalamazoo County, this state, on Aug. 10, 1880. His preliminary education was secured in the schools of Battle Creek, where he graduated from the high school in 1900. In 1904 he received his A.B. degree from the Literary Department of the University of Michigan. In the fall of 1902, he entered the medical department of the same institution and continued as a student in this department until the end of his sophomore year. He then went to Detroit, where he completed his medical course in the Detroit College of Medicine, graduating with the class of 1906. His A.M. degree was conferred on him by the Detroit University.

He served as extern of Harper Hospital for one year. While a student in Detroit, he served under the following preceptors: Drs. Don M. Campbell, Angus McLean, J. V. White and A. P. Biddle. In the fall of 1908 Dr. Haughey pursued a post-graduate course in eye, ear, nose

and throat work in Chicago, since which time he has devoted himself to the practice of this specialty.

The doctor is at present a member of the adjunct staff of the Nichols Memorial Hospital in Battle Creek; a member of the American Medical Association, and the American Academy of Medicine. He has held at various times, offices in the Battle Creek Medical Club and the Association of State Secretaries and Editors. He is also a member of the American Academy of Ophthalmology and Oto-Laryngology; the Detroit Oto-Laryngological Society, and is First Lieutenant of M. R. C., U. S. A. During November of last year, Dr. Haughey was elected Supreme Editor of the Phi Beta Phi Fraternity Quarterly.

DR. WILFRID HAUGHEY

While serving as secretary of this society and editor of THE JOURNAL, Dr. Haughey devoted a large share of his time and efforts to the upbuilding of the organization in its various departments. To enumerate the details surrounding his tenure of office would require a prolonged narration. His record may be found in every issue of THE JOURNAL that was published under his direction and editorship.

In relinquishing the duties of the office of secretary-editor of this organization, Dr. Haughey is assured of the thanks and appreciation of our entire body of members. We will follow his future career with interest and extend to him, at this time, our kind wishes for future health, happiness and prosperity.

THE ANNUAL MEETING

The Committee on Arrangements for the Annual Meeting of the Society have engaged the new Masonic Temple as the place for the holding of all the meetings. The assembly room will be utilized for the general meetings; the Section on General Medicine will be assigned to the banquet hall; the Knights Templar room will be devoted to the sessions of the Section on Surgery; the Section on Gynecology will occupy the mezzanine, and the third floor will be devoted to the Section on Eye, Ear, Nose and Throat. Such an arrangement will enable the Society to hold all its meetings under one roof. The Committee on Arrangements is actively engaged in preparing for the meeting and early reports indicate that the Flint meeting will be one of the best of our Society. Even though the meeting is not held until September 4-5, it might be well for you to bear the date in your memory and thus enable you to keep from making any conflicting engagements or vacation plans.

Editorial Comments

"TRUTHS about Medicines" as published in this journal is not "filler" material. It is, as its title implies, the truth regarding the various preparations that reach every physician, either by mail or by the manufacturer's representative. It is given space in this publication in the hope that it will enable the general practitioner to know whether or not he is prescribing a remedy possessed of therapeutic value or merely a concoction that commands a fancy price.

MICHIGAN will elect two members of the Board of Regents of the University of Michigan at the spring election. Two members of the Michigan State Medical Society are nominated: Dr. Walter

H. Sawyer of Hillsdale on the republican ticket, and Dr. H. S. Chapman of Pontiac on the progressive ticket. These members are both exceptionally good men and both should be elected. Their election would secure for the medical profession the representation to which it is entitled on the Board of Regents of our university.

THE Committee on Arrangements for the annual meeting in Flint have engaged the entire new Masonic Temple as the place for the holding of the meetings of the various sections, Council and House of Delegates. The facilities of this building are so ample and so well arranged that all the meetings may be held under one roof. The activity that is being exhibited by the Genesee County Society is indicative that the 1913 annual meeting will be of exceptional value and interest.

DR. R. L. DIXON of the State Board of Health has compiled a set of figures which show that a much larger appropriation is made by Michigan cities for fire and police protection than for the protection and preservation of the health of the citizens. The report shows that in Lansing, $1.30 per capita, is used for fire protection; 70 cents per capita for police protection; less than 5 cents for health. It is stated that this ratio holds true for the various other cities of our state. Further comment is unnecessary.

DUES. The House of Delegates and the Council have enacted that every member whose dues remain unpaid on April 1 shall be placed on a suspended list; that a list of the members whose dues are permitted to lapse shall be published in the May issue of THE JOURNAL; and, that protection by the Medicolegal Committee be denied them in any action that may be brought against them for services rendered during the period of such suspension.

If you have not paid your 1913 dues, do so at once. Send your check to the county secretary to-day. By so doing you will not compel us to report your name as one who is in arrears.

THE Chicago, Milwaukee and St. Paul Railroad has been designated as the official route for the members of our state society who will attend the annual meeting of the American Medical Association in Minneapolis, June 16-20. The management of this road will provide special Michigan sleepers that will be attached to the American Medical Association special train which leaves Chicago at 10 p. m. on the night of the sixteenth of June. Those desiring to take advantage of this arrangement will please make their reservations early, either with the secretary or with Mr. H. W. Steinhoff, district passenger agent, C. M. & St. P. R. R., Majestic Bldg., Detroit. Michigan should have a large representation at this annual meeting.

WE consider Dr. C. B. Burr's article, in this number, on the "Methods of Sewage Disposal in Germany," to be a very timely one. The proper disposal of sewage is a very vital matter and is a problem that is confronting the authorities in many of our Michigan cities, towns and villages. The public is awakening to the fact that individual communities must dispose of their wastes in some other way than by throwing them in the water of streams, lakes and harbors, from where they are carried to their neighbors. The methods that are being employed by sanitarians in the disposing of sewage and wastes are fit subjects for discussion in the county society meetings. The profession is accustomed to being looked to for information and instruction in all health problems and this makes it essential that they should become conversant with modern methods and be in position to give intelligent advice whenever they are consulted on this subject.

THE Odell bill, providing for the sterilization of the insane and those mentally deficient, passed the Senate of the Legislature with but one amendment. The amendment provides for judicial determination as in the case of commitment for insanity.

The State Nurses' Association is endeavoring to secure the passage of a bill that will provide for a state visiting examiner of hospitals, who shall make all the rounds of the hospitals and training schools. The object is to secure greater efficiency on the parts of hospitals and their schools for nurses. The operation of the nurses' registration law has piled up a surplus of $12,000 in the treasury, and the nurses are a unit in favor of using some portion of this fund to establish the profession of nursing on a higher plane.

In the May number THE JOURNAL will give a review of all the laws that are enacted by the Legislature in so far as they pertain to the medical profession.

IN days past, while looking through the special list of physicians that may be found in the directory of a telephone exchange, we have found

listed among the names of reputable physicians and surgeons, advertising quacks, osteopaths, chiropractors and members of every other cult that has invaded the field of medicine. This is not as it should be. If the county society would undertake to appoint a member or a committee to interview the managers of these exchanges, I dare say that the removal of these undesirable names from among the lists of reputable medical men would be secured. The permitting of the continuance of the practice of listing the representatives of these different cults among and alongside of the name of a reputable practitioner is equivalent to recognizing them as having some claim to the right to be called doctors and practitioners of the healing art.

Look into your telephone directory and see how many of these men and women are listed alongside your name. Then bring the matter up before your county society and secure their removal from among the list of physicians and surgeons in your local directory.

WE do not anticipate any difficulty in filling the columns allotted to editorials, comments, society news, news and notes, and the other editorial departments of THE JOURNAL. However, the number and character of the original articles that appear will be determined by the members. Without being in possession of these original articles we cannot publish them. Without them THE JOURNAL will be deficient and below par in a department which should otherwise be strong and of distinct value. Remember that this is your journal and your collaboration in this feature of our publication will enable us to cause THE JOURNAL to assume a prominent position in the field of medical journals.

The Publication Committee would like to have THE JOURNAL contain at least eight or ten original articles in each number. This will be impossible if they are not the recipients of these papers from our membership. Your official publication should receive preference over all other journals when determining the medium of publication for your medical writings.

This is not a complaint; it is merely a reminder that you owe your first allegiance to your state society and THE JOURNAL.

IT will not be long before the great outside world will be in a beckoning mood. With the arrival of the warm spring days there will steal over you a feeling of tiredness and lassitude and you will realize that the winter's work has made more or less greater inroads on your strength than you were really aware. There is but one way by means of which you can reinvigorate your tired physical state and overworked mental powers—relinquish your duties; refer your patients to one of your confrères; take a vacation.

Visit some of the larger cities; attend their medical and surgical clinics; see a show at night, a vaudeville if you please, where you may indulge in a hearty laugh; and then go to bed assured that your slumber will not be disturbed by the tinkle of the telephone bell or the knock of the midnight messenger summoning you out on a long drive or confinement case. Do this for a week or two. You will become rested; you will have received new ideas and inspirations that will cause you to do better work; and you will have enjoyed a taste of some of the pleasures of life. Returning home you will be enabled to take up your practice with a little keener interest; earn just as much if not more money and better still —you will have secured a longer lease on life. Try it. A couple of weeks of absence from work in the spring and fall of the year is essential for every practitioner of medicine.

MUCH as we may dislike the high cost of living one thing must not be overlooked; the increased cost of living has nothing to do with the tariff but is due to the fact that wages and salaries have doubled within the past decade. When the pay-roll increases the price of commodities must increase. This brings us to the point we wish to make: have you increased the monetary value that you place on your professional services? If the increase has not been commensurate with the increased cost of the necessities and commodities of life, let alone the supplies and equipment required for your office and practice, you need look no further for the reason why, with an equal amount of work done, your bank balance does not show as large a surplus as it did in former years. You cannot afford to make the one dollar call of several years ago and pay for higher priced feed, horses, buggies, harnesses or gasoline, oil, tires and repairs and find your balance equal to what it was when the expense to which you are put in making the visit is greater. Much as you may dislike to, existing circumstances and conditions will compell you to increase the charge made for services rendered. It is well that we devote a little consideration to the material side of our work and possibly be thus enabled to pursue, unhampered with financial worries, our scientific study and research.

THE first number of the *International Abstract of Surgery* appeared with the February issue of *Surgery, Gynecology and Obstetrics.* This is the first serious attempt to publish in English a complete, comprehensive and authoritative review and index of the surgical literature of the world. The editorial announcement of the object of this new publication states: Our object is to furnish in English a complete bibliography of the surgery of the world; to print an abstract of the most worthy literature in each department of surgery, abstracted by the men familiar with the literature and the men producing it in each country.

Agreements have been entered into with the editors and publishers of the three most important abstract journals of France and Germany, whereby there is an exchange of material. This means that American writers will have the abstracts of their writings published in these foreign publications.

This *"Abstract"* deserves and should receive the hearty support of the American profession in order that the editors and publishers may be enabled to continue the compilation, indexing and abstracting of the surgical literature of the world to-day and present this material—the value of which cannot be estimated—in the hands of every interested surgeon at the first of each month. We congratulate the editors on the contents of the first number and trust that the profession of Michigan will endorse this effort by given them their subscription support.

State News Notes

Dr. J. E. Thompson has removed from Elkton to Detroit.

Dr. Campbell, recently of Posen, has resumed practice in Metz.

Dr. Berggren of Pisgah has moved to Weston, Neb., and has entered general practice in that city.

Drs. Wm. McBurney and W. S. Stevens of Iron River have formed a partnership for the practice of their profession.

Dr. Frank Burr Marshall of Muskegon, who has been confined to his home for nine weeks with a broken hip, is now able to be around.

Dr. Sara T. Chase was elected secretary-treasurer of the Traverse City Anti-Tuberculosis Society at the annual meeting held February 25.

Dr. Guy L. Kiefer, health officer for Detroit, addressed the annual meeting of the Kalamazoo Anti-Tuberculosis Society on February 25.

Drs. S. C. Graves and Wm. H. Veenboer announce the removal of their offices from the Ashton Building to the Metz Building, Grand Rapids.

Drs. John R. Rogers and Charles E. Hooker announce the removal of their offices from the Gilbert Building to the Metz Building, Grand Rapids.

Dr. Andrew P. Biddle of Detroit has been appointed by Governor Ferris as a member of the State Board of Health for the term beginning January 31.

Dr. Miles F. Porter of Fort Wayne addressed the Calhoun County Medical Society on March 4. The subject of his address was "Hyperthyroidism."

Dr. W. T. Dodge of Big Rapids attended the presidential inauguration ceremonies in Washington. Dr. Dodge went as a member of Governor Ferris' staff.

Dr. and Mrs. Fred Taylor of Carson City have gone to Arizona in the hope that the climate of that state will have a beneficial influence on the health of the doctor.

Dr. George Bartley has returned to North Escanaba and resumed practice after an absence of several months, during which time he pursued a postgraduate course in Chicago.

Dr. G. L. Dixon, secretary of the State Board of Health, has consented to edit a page devoted to public health matters in THE JOURNAL. The May number will contain this new department.

The meeting of the Upper Peninsula Medical Society will be held under the auspices of the Marquette-Alger County Society at Ishpeming. The exact dates in July have not as yet been determined.

Provision for an infant clinic, to be operated under the supervision of the health department, has been made in the annual budget of the city of Grand Rapids. Health Officer Slemons is in charge of this movement.

The common council of Monroe has submitted a proposition for bonding Monroe for $10,000 for the purpose of creating a fund wherewith to erect a municipal hospital. This proposition will be voted on at the April election.

Dr. Glenn A. Bulson, recently of Vicksburg, sailed January 11 for Europe. He will pursue special studies at Vienna and Berlin in the eye, ear, nose and throat clinics. The doctor expects to return during the latter part of July.

Medical inspection of all students in the public schools of Port Huron will be provided as a result

of a ruling by the board of education. The inspection will be conducted gratis by the St. Clair County Medical Society.

Dr. Roswell Park of Buffalo addressed the Detroit Academy of Medicine on February 23. The subject of his address was "Medicine and Surgery in Classic Art," with lantern-slide illustrations. A dinner was tendered Dr. Park at the Detroit Club.

Dr. Guy L. Kiefer, health officer of Detroit, who is one of the state lecturers appointed by the lecture bureau of the American Medical Association, addressed public health meetings in Kalamazoo, Cadillac and Manistique during the past month.

Dr. U. DeVries of Grand Rapids, who was severely injured during the latter part of February when the automobile in which he was riding was struck by a train, has gone to Chicago. He contemplates having a plastic operation performed on his nose.

The Flint Maternity Home and Children's Hospital Board has been organized by Flint society women to raise $10,000 for the erection of a home and hospital. The Hurley Hospital will donate sufficient land next to their buildings for the purpose of this new home and hospital.

Dr. Robert L. Dixon of the State Board of Health addressed a public meeting of the council and water board of Alpena on February 16. Largely as the result of this meeting, Alpena has caused the installation of a chlorinating system for the purification of its water-supply.

The city hospital board of Flint has decided to build an addition to the Hurley Hospital. The building of this addition will provide fifteen new rooms at an expenditure of about $15,000. The hospital authorities will devote these rooms to the care of infants and maternity cases.

Since the common council of Jackson has seen fit not to appropriate the requisite funds for the erection of an annex to provide additional facilities for the City Hospital it is intimated that the movement has been started to induce the Catholic Church to erect a Catholic hospital in that city.

The last issue of the *Bulletin* of the State Board of Health is devoted to the publication of an address on "Eugenics" by Dr. V. C. Vaughan, Sr. If you have not heard Dr. Vaughan's address it is suggested that you send to the secretary of the board for a copy of the *Bulletin* that contains this valuable and interesting article.

The failure of the hospital committee of Holland to raise sufficient money to build a hospital suitable to the needs of that city has again been taken up and a new impetus has been given to the project by the receipt of an offer in which the donors agree to provide the site for the building. Fifteen thousand dollars has been subscribed.

Dr. J. B. Kennedy of Detroit was elected president of the Detroit Board of Health for the fourth time at the annual meeting held on March 10. In addition to Dr. Kennedy the following officers were appointed: Dr. C. H. Oakman, vice-president; Dr. Guy L. Kiefer, health officer, and John F. McKinley, secretary.

In conformity with a resolution adopted at the last meeting of the Association of American Medical Colleges, the Detroit College of Medicine has adopted the five-year course and hereafter all matriculates will be required to take a year's course in physics, chemistry, animal biology and modern languages. The requirement will become in force on Jan. 1, 1914.

Governor Ferris has appointed the following delegates to represent Michigan during the Fourth International Congress and School of Hygiene, to be held in Buffalo, N. Y., August 25-30: Luther L. Wright, Lansing; T. M. Koon, Grand Rapids; R. L. Dixon, Lansing; J. H. Kellog, Battle Creek; A. S. Warthin, Ann Arbor; Guy L. Kiefer, Detroit; L. L. Forsythe, Ionia.

The sixty-third anniversary of the founding of the Medical Department of the University of Michigan was celebrated in Ann Arbor on February 19. The speakers were Dr. Abraham Jacobi, New York City, and Dr. Willett Herrington, Bad Axe. The subject of Dr. Jacobi's address was: "What are Doctors Good For?" In the morning the doctor gave a talk before Dr. Vaughan's class in hygiene on the work that is being done in the larger cities to bring about better sanitary conditions and to teach the people how to live and keep well. The subject of Dr. Herrington's address at the afternoon meeting was: "The Country Doctor." In the evening the Ann Arbor Medical Club tendered a reception to the faculty, medical students and invited guests.

The following interesting tabulation of the causes of death in Michigan has been tabulated by the secretary of the State Board of Health:

While the general health of the state for 1912 was much better than during the previous year, the death-rate from cancer increased from 72.3 per thousand to 74.3. The rate of death from violence decreased from 83 to 76.3. The rate on diarrheal enteritis decreased from 52.9 to 44.

The deaths in Detroit from all causes during the year were 7,785, or a rate of 15.1 per thousand. The detailed causes of death were: under 1 year, 1,984; from tuberculosis, 486; from typhoid fever, 88; diphtheria, 188; scarlet fever, 58; whooping-cough, 78; pneumonia, 923; diarrhea, 472; cancer, 367; violence, 524.

The following appointments to the medical staff of the Detroit General Hospital are announced by Dr. John N. E. Brown, superintendent: department of internal medicine—director, Dr. Frank J. Sladen, Baltimore; Dr. Homer E. Safford, senior associate; general surgery—director, Dr. H. N. Torrey; senior associate, Dr. H. W. Hewitt; diseases of children—director, Dr. R. S. Rowland; senior associate, Dr. T. B. Cooley; associate, Dr. D. J. Levy; abdominal and pelvic surgery—director, Dr. William F. Metcalf; senior associate, Dr. E. K. Cullen; diseases of ear,

nose and throat—director, Dr. J. E. Gleason; genito-urinary surgery—director, Dr. Harry W. Plaggemeyer; obstetrician, Dr. W. H. Morley; orthopedic surgery, Dr. F. C. Kidner; diagnosis and research—director, bacteriologist and pathologist, Dr. C. R. Meloy, and roentgenologist, Dr. W. A. Evans.

The annual meeting of the Michigan Health Officers' Association was held in Ann Arbor February 26-27. The following papers were read: "Sanitation in its Relation to Public Schools," L. L. Wright; "What Constitutes a Model Milk Ordinance," Dr. A. H. Rockwell; "An Enlarged Public Health Service," Dr. R. L. Dixon; "Eugenics," Dr. V. C. Vaughan; "Municipal Control of Venereal Diseases," Dr. A. F. Fisher; "The Public Health Nurse and Her Work," Dr. Guy L. Kiefer; "Altruism in Public Health Work," Dr. W. H. Sawyer; "Early Diagnosis of Tuberculosis," Dr. V. C. Vaughan, Jr.; "Bovinine Tuberculosis in its Relation to Public Health," Dr. Ward Giltner.

The following officers were elected for the ensuing year: President, Dr. Guy L. Kiefer, Detroit; vice-president, Dr. T. J. Langois, Wyandotte; second vice-president, Dr. T. M. Koon, Grand Rapids; third vice-president, Dr. A. F. Fisher, Hancock; fourth vice-president, Dr. Edward Goodwin, Bay City; secretary-treasurer, Dr. R. L. Dixon, Lansing.

Dr. M. L. Holm, bacteriologist of the State Board of Health, has received a ruling from the postal authorities relative to the admission of specimens of diseased tissues and information concerning them as parcels-post matter.

Previously, on account of a written description enclosed with the specimens, the matter was held to be under the first class classification and parcels forwarded to the department with parcels post stamps have been held up by the postmasters for extra postage. The packages, which average five ounces for tuberculosis and eight ounces for diphtheritic specimens, at first class rate, became very expensive and the matter was taken up with the authorities.

The following ruling was secured: "Specimens of diseased tissues, including specimens of diphtheria and tuberculosis, are admissible as parcels post matter and must be paid by parcels post stamps as other matter of that class; that though such specimens constitute mail of the fourth class, it shall be labeled 'specimen for bacteriological examination' when it shall be pouched with letter mail."

The part of the ruling that is of interest and importance is as follows: "Sample forms bearing the names and address of patients from whom a specimen of sputum has been taken, together with the names and addresses of his physician and health officer and other information concerning the patient, all for the purpose of description, such inscriptions are regarded as permissible additions to fourth class mail and may be enclosed with these specimens without subjecting them to more than the fourth class rate of postage."

A bill has been introduced into the legislature in which are incorporated the ideas of Prof. V. C. Vaughan, Sr., for the establishment of an efficient department of health.

The foundation of this bill is the division of the entire state into health districts. These districts are to comprise one county each except in instances of exemption. Counties in which there are cities of more than 18,000 population shall have the district outside such cities considered as a district or part of a district. Any two counties having a population of less than 20,000 each, exclusive of cities of more than 18,000, may be organized by the State Board of Health as a joint health district.

Cities of 100,000 or more are exempt from the provisions of the law. Cities of 18,000 or more and less than 100,000 will be considered as independent health districts.

Each district shall have a health commissioner appointed for a term of four years. In counties the appointment will be made by a board consisting of the probate judge, commissioner of schools and the county clerk. In cities this board will be composed of the mayor, superintendent of schools and the city clerk. In joint districts the two probate judges, two county school commissioners and the county clerk of the largest county will act. Applicants must pay an applicant's fee of $10 to be eligible to take the examination and must be a licensed physician.

Counties will pay from $1,500 to $3,000 per annum, according to the population, and cities from $3,000 to $6,000. The health commissioner shall act as county physician. The bill is known as the Amberson bill.

Deaths

Bigelow, Delno M., M.D. Detroit Homeopathic College, 1904. Member of Wayne County Medical Society, former member Detroit Board of Health. Died at his home, 1051 Mt. Elliott Avenue, Detroit, Feb. 24, 1913, from overwork, aged 38.

Wilson, J. E., M.D. Rochester, Mich. Oldest practicing physician in Oakland County. Graduate of the Castelton Medical College, Vermont. Resident of Rochester for sixty years. Volunteer surgeon in the Civil War. Died at his home, March 7, 1913, aged 84.

May, Robert J., M.D. Metamora, Mich. University of Michigan, 1892. Died at his home on March 4, 1913, after an illness of five days, from pleuropneumonia, aged 43. Dr. May was a member of the Lapeer County Medical Society. Interment took place at his old home in St. Thomas, Ont.

Barry, J. A., M.D. University of Pennsylvania. Member of Tri-County Medical Society, member of state legislature 1906-1908, chairman Wexford County Board of Supervisors for ten years; ex-superintendent of the poor, and president of Harrietta. Died at his home in Harrietta, Feb. 9, 1913, aged 64.

Society Proceedings

ALPENA COUNTY MEDICAL SOCIETY

The regular meeting of the Alpena County Medical Society was held Feb. 19, 1913, in the parlors of the New Alpena House.

The guest of the evening was Dr. E. E. Barclay, efficiency expert of the Alpena Chamber of Commerce, who was entertained at a 6-o'clock dinner in the dining

rooms. Those present were: Drs. D. A. Cameron, S. T. Bell, A. E. Bonneville, Otto Bertram, Leo Secrist, E. E. McKnight, W. A. Secrist, J. F. McDaniels, J. D. Dunlop, J. W. Small, A. Gaureau and C. M. Williams.

Following the dinner Dr. Barclay addressed the society on "Civic Responsibility of the Physician." "Physicians," Dr. Barclay stated, "are the most powerful men in the community. If they are not leaders and molders of public thought, they are not fulfilling their opportunities."

Other men taking part in the program were Drs. Bertram, Bonneville, Dunlop, Secrist and McKnight.

The next meeting will be held on March 19, at which time Dr. E. E. McKnight, our new president, will entertain the society. C. M. WILLIAMS, Secretary.

BAY COUNTY MEDICAL SOCIETY

The Bay County Medical Society held four meetings during February, 1913, with an average attendance of about twenty-five.

The February 11th meeting was held in the ordinary of the Wenonah Hotel at 8 p. m. Attorney A. H. McMillan, one of the city aldermen, was the guest of the evening and read a paper on "Medical Jurisprudence, Including the Workmen's Compensation Act." The paper was a very timely one and was received with a great deal of interest. Mr. McMillan answered a number of questions put to him by the members.

Following the paper and discussion, the Society enjoyed a complimentary buffet luncheon given by the surgeons of the Society.

On February 18, the guest of the evening was Dr. George E. McKean of Detroit. At 6 p. m. a number of members had dinner with Dr. McKean in the ordinary of the Wenonah Hotel. At 8 p. m. the meeting was called to order at the same place. Dr. McKean gave a talk on "The Clinical Significance of Blood-Pressure." A Tycos sphygmomanometer with enlarged dial was used in demonstrating the technic of taking the pressure.

Abstract: Blood-pressure depends on cardiac energy, resistance against which the heart works, elasticity of vessels, and the amountof blood in circulation. Pressure varies with exercise, excitement, during digestion and with sex. Best time to take pressure is two hours after meals. Exercise is an important factor in ascertaining the true condition of tension in vessels. A reading below 100 or above 150 is considered pathologic. Important to insurance companies and in recognition of approaching shock in anesthesia or surgery, and in diagnosis of arterial sclerosis. Pressure is low in tuberculosis, typhoid fever, anemia and epilepsy. Increased in cerebral tension, tumors of brain, hemorrhage and anemia. Important in obstetrics—high pressure means danger. There is danger in lowering a high blood-pressure. We must find the cause, whether due to the heart itself, to weak walls, amount of blood or nervous control.

On February 25 the Society held its meeting at the Bay City Club, being called to order at 8 p. m. The paper of the evening was read by Dr. E. C. Warren of Bay City on "The Differential Diagnosis of Appendicitis and Reflex Abdominal Pain." The paper was illustrated by charts and drawings.

Abstract: The history of appendicitis and its recognition as a surgical disease was gone into and the importance of securing a history of the cardinal symptoms in the proper order was emphasized. We must have (1) pain, (2) nausea or vomiting, (3) local tenderness, (4) fever and (5) leukocytosis, in the order named, in an acute primary attack of appendicitis. Several cases were reported; one in particular in which an attack of pneumonia was mistaken for appendicitis because not enough care was exercised in securing the syndrome of symptoms in the order named.

The paper was freely discussed. After the paper and discussion, a buffet luncheon was served by the eye, ear, nost and throat specialists of the Society.

At the March 4, 1913, meeting of the Bay County Medical Society Dr. H. E. Randall of Flint read a paper on "Dyspepsia and Indigestion From a Surgeon's Viewpoint."

Abstract: According to the findings of Pableau of St. Petersburg, 70 per cent. of the cases of stomach trouble brought to the attention of doctors arise from diseases foreign to the stomach. The digestive tract can be likened to a chemical laboratory. The drinking of water during meals is not harmful, but on the contrary water increases secretion of gastric juice and is a wholesome drink. The principal troubles with the stomach itself are ulcers and cancers. Dyspepsia is due either to general disease or arises outside the stomach itself, or is due to some disturbance of the stomach.

The paper was illustrated with colored charts.

The Society extended a vote of thanks to Dr. Randall for his courtesy in addressing the Society.

H. N. BRADLEY, Secretary.

CHIPPEWA COUNTY MEDICAL SOCIETY

The regular meeting of the Chippewa County Medical Society was held in the Park Hotel, Sault Ste. Marie, on March 4, 1913. The meeting was called to order by President Husband with a representative attendance of members present. The minutes of the last meeting were approved as read. Several clinical cases were reported and discussed.

The program consisted of two papers: "The Question of Diet," was the title of the paper that was presented by Dr. A. E. Lemon. Dr. R. E. Stocker, Brimley, read a paper entitled, "Growing Disrespect of the Laity Against the Doctors." Both of these papers received extensive discussion by the majority of the members present.

A letter was received from Dr. Bret Nottingham, Lansing, in regard to the chiropractic bill. After discussing this matter it was decided that each individual member of the society should write to the senator and representative of this district setting forth their disapproval and protest against the passage of such a bill.

JAMES GOSTANIAN, Secretary.

GRATIOT COUNTY MEDICAL SOCIETY

The regular meeting of the Gratiot County Medical Society was held at the Wright House, Alma, Feb. 27, 1913.

Dr. W. M. Drake, Breckenridge, was elected delegate to state society meeting at Flint; Dr. L. A. Howe, Breckenridge, alternate.

A very interesting lantern slide demonstration of "The Use of the Roetgen Ray in Surgery and Internal Medicine," was given by Dr. Preston M. Hickey, Detroit.

Much interest was elicited by this paper, Dr. Hickey presenting several new aspects of this most valuable adjunct to modern medicine and surgery.

E. M. HIGHFIELD, Secretary.

DELTA COUNTY MEDICAL SOCIETY

The regular monthly meeting of the Delta County Medical Society was held at Escanaba, Feb. 14, 1913. Current medical events were informally discussed.

H. W. LONG, Secretary.

GENESEE COUNTY MEDICAL SOCIETY

The regular monthly meeting of the Genesee County Medical Society was held in the Masonic Temple on Feb. 26, 1913.

President Bates introduced Dr. Wile of Ann Arbor, who occupies the chair of syphilology and dermatology in the University of Michigan, as the principal speaker of the meeting.

Dr. Wile talked on the "Diagnosis and Treatment of Syphilis." A number of clinical cases were kindly brought by the members and Dr. Wile held an interesting clinic.

The paper was discussed by Dr. E. C. Rumer.

Dr. Whitaker reported a case of anophthalmos.

Dr. Wile was extended a vote of thanks and elected an honorary member of the society.

Following the meeting the members were invited to the home of Dr. and Mrs. Bird, 419 East Keasley Street, where a dutch lunch was served and the time was informally spent at cards.

A special meeting of the Genesee County Medical Society was held March 10, at 4 p. m., in the Masonic Temple.

Dr. F. C. Warnshuis, secretary-editor of the Michigan State Medical Society, read a very interesting paper entitled: "The Open Treatment of Intractable Fractures." The discussion was opened by Dr. Manwaring, followed by Drs. Randall and Wheelock.

On motion, Dr. Warnshuis was given a vote of thanks and elected an honorary member of the society.

A banquet in honor of the president, Dr. W. H. Sawyer and the secretary, Dr. F. C. Warnshuis, was held in the Bryant House at 7:30 p. m. Dr. Randall was the toastmaster and the following toasts were responded to: "Sixty Years Ago," Dr. R. N. Murray; "Practicing Medicine in the Lumber Woods," Dr. C. H. O'Neil; "Up in New York State," Dr. G. R. Goering; "The Charge up San Juan Hill," Dr. E. C. Rumer; "Pickaninies," Dr. W. J. Orr; "An Eye for an Eye," Dr. S. T. Conover; "Babies," Dr. J. C. Benson; "The Man on Horseback," Dr. C. B. Burr; "Our Journal," Dr. F. C. Warnshuis; "The Michigan State Medical Society," Dr. W. H. Sawyer.

C. P. CLARK, Secretary.

KALAMAZOO ACADEMY OF MEDICINE

Program of Last Meeting

Neurologic clinic at Kalamazoo State Hospital by Drs. Ostrander, Inch and Rawlings.

Early classification of insanity: (a) Early elation; mental elation; (b) mental depression; (c) alternating periods of elation and depression; circular insanity; (d) maniacal, depressive—12 to 20 per cent. of all insanity; 55 per cent. women, 45 per cent. men.

There is no specific type of melancholia; 80 per cent. of the maniacal-depressive cases have degenerate history. The Odell bill is particularly applicable to this class. Fifty per cent. of all the people have some degeneracy in their ancestors.

First group of four cases demonstrated the above classification.

Second group: Dementia praecox—mental deterioration:

Case 1 demonstrated hebephrenic type of dementia praecox; age 19; was very precocious when in school. Disturbance of emotional field; moral deterioration; impulsive.

Case 2. Catatonia—religious delusion, actively hallucinated. Muscles are rigid, so that the patient remains in one position for hours at a time, until exhaustion supervenes.

Case 3 demonstrated the paranoid form, which presented delusions of grandeur and pronounced self-importance.

Dr. Inch presented a group of cases, of which he first demonstrated the Hunnington type of chorea. Development after 30. Hereditary type, also known as the senile type. No pathologic changes in cord or brain of those that die from this type.

Case 2. Multiple Sclerosis. Development as early as childhood. Confused with hysteria. Symptoms: weakness of arms and lower limbs, dimness of vision, blindness, shooting pains, intentional tremor, visual field contracted, nystagmus, monotonous or scanning speech. Mental deterioration comes late. Delusions of persecution and hallucinations of sight and sound. Patient had an aunt insane; had an alcoholic history; frequently drunk.

Cases 3 and 4. Progressive muscular atrophy and amyotrophic lateral sclerosis; atrophy of the thenar muscles of hand, with progressive muscular atrophy of arm, shoulder and body. In addition to this, in amyotrophic lateral sclerosis, a spastic condition of reflexes develops, which shows envolvement of lateral columns.

Patient No. 4 was irritable, impulsive, untidy of habits, reflexes increased, no Babinski or ankle-clonus, muscles of thumb and hand react to reaction of degeneration.

Cases 5 and 6 were those of general paresis. Convulsions after 35 should be called those of general paresis.

Demonstration of lumbar puncture: Entrance to spinal is made on a line with the crest of ilium and spine of fourth lumbar vertebra and little to one side of spine. Steel needle, caliber 103 to 169.

Laboratory Tests of Blood and Spinal Fluid, by Dr. Rawlings

In investigating the blood of luetics and non-luetics, Wassermann found that they reacted differently in solution. In the non-luetics there was a giving up of the hemoglobin of the corpuscles with a tinging of the solution a uniform red. In the luetic solution the corpuscles retained their hemoglobin and sank to the bottom of the test-tubes in a red heap, with the clear fluid above. The difference in reaction depending on the antibody which had developed in the luetic blood. Hemolysis is normally due to the action of an element in the blood-serum, conveniently termed the complement. Its action depends on another element normally in the blood, which affects the corpuscles, rendering them sensitive to the action of the complement. It is called the amboceptor. Without the sensitizing influence of the amboceptor, no hemolysis can occur. It

was found that the luetic antibody acted more effectively when the extract of animal tissue was present in the solution, portions of luetic tissue or the alcoholic extract of non-syphilitic tissues such as the liver or heart. This extract was termed the antigen. A combination of the antibody of the luetic serum and the antigen occurred to prevent the hemolytic action of the complement by fixation of the complement. With normal blood we have the following reaction: Corpuscles plus normal blood-serum plus antigen plus complement plus amboceptor = hemolysis. The syphilitic blood-serum, the following reaction: Luetic blood-serum with its antibody plus amboceptor plus complement plus antigen plus corpuscles = no hemolysis. Wassermann reaction has been obtained as early as eight days after the initial lesion. About 92 per cent. of the primary stage give a positive Wassermann; 95 per cent. of the secondary stage give a positive Wassermann, and 89 per cent. of the tertiary stage give positive. The positive findings then decrease in the early and late latent syphilitic conditions. In the parasyphilitic conditions it increases again, paretics giving 86 per cent. positive Wassermann; tabetics and cerebralspinal syphilitics, 68 per cent. Hereditary syphilis gives 100 per cent.

When applied to the cerebralspinal fluid the Wassermann test is not so reliable as with the blood-serum. This is thought to be due largely to the alkalinity of the fluid, and investigators rely more on the laboratory tests for globulins in the fluid than on the Wassermann. According to Noguchi, positive Wassermann is obtained in 73 per cent. of paretics, 54 per cent. of tabetics, and 50 per cent. of cerebralspinal syphilitics. Other observers hold that only 10 per cent. of the above give a positive Wassermann unless a very large amount of cerebralspinal fluid is used.

Globulin occurs in the cerebralspinal fluid wherever there is a destructive process going on in the central nervous system. There is normally a small amount of albumin, but one form of albumin (nucleo-albumin) occurs only in disease of the nervous tissues, the faintest trace indicating an active disease process. Nonna and Apelt, two investigators, found that saturate ammonium sulphate would throw down the nucleo-albumin in the cerebralspinal fluid as a trace of opalescence, opalescence or clouding, according to the degree of involvement. The fluid must be free from blood-corpuscles, and the test made with the utmost care to prevent false findings. By taking this same fluid and filtering out the nucleo-albumin obtained and adding a few drops of acetic acid and boiling, serum albumin was thrown down as a clouding or flocculent precipitate, according to the involvement. A method of estimating the total amount of serum albumin is that of centrifuging the fluid with picric and citric acid in special tubes. A finding of not more than 0.02 per cent. of albumin in the fluid indicates a pathological process. Up to .07 is indicative of paresis, higher than that of purulent meningitis or cerebralspinal syphilis.

In addition to the globulin index and the albumin content, lymphocytes are sought for in the fluid. One to five cells to the c.mm. may normally exist; five to nine cells is considered border line; above nine cells, pathological. Paresis gives from ten to eighty cells to the c.mm., and cerebralspinal syphilis from 80 to 1,400 cells to the c.mm. The only other condition in which there may be a large cell count is in purulent or tubercular meningitis, especially the former. High cell counts are obtained near the large industrial centers of the country, where the paretic types are more aggravated than in the inland districts. The causative factor being supposedly the greater stress in the struggle for existence.

Luncheon

The meeting adjourned from Pathological Laboratory to the Auditorium, where a luncheon had been prepared for those present through the courtesy of Dr. Noble and his assistants.

Business Session

Following luncheon a short business session was held. Dr. Ostrander read the Glassner and Odell bills. A committee, composed of Drs. Ostrander, Inch and Stone, was appointed and instructed to endorse these bills; to notify Senator Grace of this endorsement by the Academy, and that he should spread this endorsement on the journal of the senate.

Resolution, offered by Dr. R. E. Balch, Dr. Inch supporting, that the Academy express appreciation of the significance and importance of the work carried out by Rev. Caroline Bartlett Crane, through which meat inspection may be applied in a more rigid and efficient manner.

Abstract of Paper on "Louis Pasteur, His Life Work," by Dr. Chas. Hitchcock, Detroit, Mich.

Louis Pasteur, whose ancestors were tanners for three generations, born at Dole, France, Dec. 26, 1822, developed early the serious and studious bent of mind which led him to those habits of patient, painstaking industry that characterized all his work.

Trained in scientific paths, he early developed a fondness for the problems of chemistry, and did important work on problems of fermentation connected with the manufacture of wine and beer. These gave him prominence, and he was drafted by the government for investigation of the silkworm disease, and later for probing the mystery of different diseases which were devastating the sheep, the pigs and the chickens of France.

He saved immense sums not only to the silk industry but also to the stock raisers, and in his development of vaccines proved a pioneer in this field of therapy. Though not trained in usual medical paths, he was elected to the Academy of Medicine, became an apostle of asepsis, pointed out the nature of puerperal infections, the necessity of sterilization, and was a veritable prophet of a new era in surgery. Lister acknowledged his debt to him, and the nation publicly and repeatedly recompensed him.

His crowning triumph was his inoculations against hydrophobia, and though he died with ambitions still unfulfilled, he had keen satisfaction in the great good which he had accomplished, and received plaudits and honors and financial rewards from a grateful nation, medical and other scientific bodies, and the highest recognition he could have desired. Yet he never swerved from the path of patient industry and simple industry, and advised his hearers to "cutivate the serene peace of laboratories and libraries" in their quest for new truth.

He died Sept. 28, 1895, and left, as a precious legacy to science, the story of his indomitable will, unflagging energy, simple modesty, high purpose and patient industry.

His scientific achievements are the glory of France, who showed herself a grateful and appreciative country.

Joint Session

Kalamazoo Academy of Medicine and the annual meeting of the Kalamazoo Anti-Tuberculosis Society met in joint session on the evening of February 25.

Officers elected for ensuing year: president, Herman Ostrander, M.D., vice-presidents, J. J. Knight, W. O. Jones, C. A. Blaney, J. B. Jackson, M.D.; treasurer, S. R. Light, M.D.

Dr. B. A. Shepard, chief of staff, reported that patients had made over 200 calls to dispensary on Lovell Street.

Dr. G. L. Kiefer gave an interesting and lucid paper on "Guiding a City's Health."

Drs. Cullen and Cumming will be our guests at a luncheon at the Burdick, on Tuesday, March 11, at 12 o'clock noon.

Dr. A. H. Rockwell attended the meeting of health officers held in Ann Arbor, February 26 and 27.

Dr. A. Hochstein submitted to the surgical relief of gall-stones, recently. Dr. John Fletcher is convalescing from a protracted illness. Their friends and colleagues wish them a speedy recovery.

The state medical journal has been reconstructed. The present issue is a very attractive and interesting one.

C. B. FULKERSON, Secretary.

KENT COUNTY MEDICAL SOCIETY

The regular meeting of the Kent County Medical Society was held at the Board of Commerce Chambers, Feb. 26, 1913.

Dr. T. C. H. Abelmann of the Michigan State Soldiers' Home read a paper entitled "The Treatment of Trigeminal Neuralgia by Superficial Injection of Osmic Acid and Alcohol." Dr. Abelmann's paper, based on his large experience at the Soldiers' Home, was exceedingly practicable and will appear in a later number of THE JOURNAL. A good discussion followed the reading of this paper.

At the regular meeting of the Kent County Medical Society, held March 26, 1913, at the Board of Commerce Chambers, Dr. Allen B. Kanavel of Chicago read a paper on "Experiences of Ductless Gland Surgery."

Abstract: The present discussion deals with morbid changes which ensue on disease of the testicles, ovaries, thyroid and hypophyses. The interrelation of these glands is well known. The particular question under discussion is that dealing with the growth of the individual, in the first instance; and secondly, with the mental changes incident to the disease. Relative to this we have the change in the structure of the bone. These phases vary. Experiments on dogs, in which splenectomy was done, were detailed as bearing on the question of osteomalacia (a case of which, with operative results, was reported). The relation of mental changes, dementia praecox, etc., to the glands and the thyroid was considered with the reports of several cases operated on in which these conditions were the prime factors. The side of undergrowth and overgrowth in relation to the hypophysis was considered, with the pathology and the clinical results in leontiasis ossea, acromegaly and dwarfs, were discussed, with a report of cases operated on.

E. W. DALES, Secretary.

LENAWEE COUNTY MEDICAL SOCIETY

The Lenawee County Medical Society met in the public library, Adrian, Tuesday, Feb. 25, 1913, with a good attendance present.

At the last regular meeting it was decided to hold two meetings during each month; on the second and fourth Tuesdays for the remainder of this year.

The society also decided to follow the lesson plan of the American Medical Association together with special papers by visiting physicians.

Dr. Sprague of Palmyra was the leader of the lesson on anatomy and physiology of the heart and demonstrated his remarks which were interesting as well as instructive.

The next meeting will be held at Adrian on March 11.

GEORGE M. LOCHNER, Secretary.

MARQUETTE-ALGER COUNTY MEDICAL SOCIETY

At the January, 1913, meeting of the Marquette-Alger County Medical Society the following officers were elected: president, Paul Van Riper, M.D., Champion; vice-president, C. J. Larson, M.D., Marquette; secretary-treasurer, H. J. Hornbogen, M.D., Marquette.

Upon resolution it was decided to hold four meetings during the year, in the months of March, June, September and December.

The meeting of the Upper Peninsula Medical Society will be held under the auspices of the Marquette-Alger Society sometime in July, at Ishpeming.

H. J. HORNBOGEN, Secretary.

MONTCALM COUNTY MEDICAL SOCIETY

The Montcalm County Medical Society will meet at Hotel Phelps, Greenville, April 10, 1913, at 10:30 a. m. The following is the program of the meeting:

Call to order by the president, Dr. L. E. Kelsey. Reading of the minutes of last meeting. Reception of new members. Paper: "Present Day Aspect of Autogenous Vaccination with Reference to Neosalvarsan and Salvarsan," Dr. F. A. Johnson. Paper: "Relationship of the Country Physician with His City Brother," Dr. James Purdon; discussed by Dr. N. W. Miller. Paper: "The Business Side of the Practice of Medicine," Dr. M. E. Danforth. Paper: "How Can We Make Our Meetings of General Interest," Dr. J. O. Nelson. Paper: "Scarlet Fever," Dr. F. R. Blanchard. Unfinished business.

H. L. BOWER, Secretary-Treasurer.

MUSKEGON-OCEANA COUNTY MEDICAL SOCIETY

The regular meeting of the Muskegon-Oceana County Medical Society was held at the office of Dr. Alfred Broche, Muskegon, on Friday evening, Jan. 17, 1913. Dr. Caroline Hedger, Chicago, addressed the society on, "The Child Welfare Movement," for which an organization has been started in Muskegon.

On Friday evening, Jan. 31, 1913, the regular meeting of the Muskegon-Oceana County Medical Society was held at the Occidental Hotel, the society being entertained at dinner as the guests of Dr. George S. Williams. At 8:30 p. m. the meeting was called to order for the scientific program. Dr. Burton R. Corbus, Grand Rapids, was present as a guest of the society and presented a paper on "Cardiovascular Diseases, with Especial Reference to Etiology and Treatment." A general discussion of this paper followed, being opened by Drs. A. A. Smith, J. M. J. Hotvedt and R. G. Olaon, and closed by Dr. Corbus.

The regular meeting of the Muskegon-Oceana County Medical Society was held in the offices of Dr. R. I. Busard, at Muskegon Heights, Friday evening, Feb. 14,

1913. Dr. Busard read a paper on "Fractures, Their Diagnosis and Treatment." Two cases, demonstrating the use and results of the application of bone plates, were presented for clinic.

J. T. CRAMER, Secretary.

ONTONAGON COUNTY MEDICAL SOCIETY

The Ontonagon County Medical Society met in regular session at the Elk Hotel, Ontonagon, March 14, 1913, President E. J. Evans presiding.

Dr. H. D. Cornell of Victoria had prepared a paper on "Fractures," but being unable to attend his paper was read by the secretary. A lengthy discussion followed, calling up many interesting cases from the members.

J. S. NITTERAUER, Secretary.

SHIAWASSEE COUNTY MEDICAL SOCIETY

The regular meeting of the Shiawassee County Medical Society, held at the offices of Dr. D. H. Lamb, March 4, 1913, was preceded by a fish dinner. The society was addressed by former Mayor W. D. Burke on "Outside Opinions of the Medical Man." Mr. Burke noted the educational progress of the physician, holding that because of the higher requirements for a practitioner, the laity receive better service. He extended his best wishes for the continued progress of the "Man of Humanity."

A number of members participated informally, and the meeting was one of interest.

Shiawassee County is striving to secure practically every regular practicing physician in the county for its membership roll this year.

D. H. LAMB, Secretary.

TRI-COUNTY MEDICAL SOCIETY

On Feb. 6, 1913, the regular meeting of the Tri-County Medical Society was preceded by a 6 o'clock dinner, given in honor of the dentists of Cadillac. The meeting was held in the Medical Society's Club Rooms and the greater part of the program consisted of a discussion of quacks and nostrums. As a new dental bill is pending before the legislature, the physicians, by a unanimous vote, instructed the secretary to communicate with the senators and representatives asking their favorable action.

At the February 20th meeting of the Tri-County Medical Society, Dr. J. E. Oden presented a paper on "Immunity." Several charts were exhibited to illustrate and further demonstrate the contents of the paper. A frank discussion followed.

March 6, 1913, at the regular meeting of the Tri-County Medical Society, Dr. B. H. McMullen read a paper on "The Anemias," and Dr. R. Brodeau presented one on "Diseases of the Pericardium." These papers were thoroughly discussed by the members of the Society.

A program for the entire year has been prepared. The first half of the year will be devoted to a systematic study of the heart and circulation, while the last half will be given over to diseases of the bones, fractures, dislocations, etc.

The physicians of Cadillac have installed a very complete x-ray apparatus at the Mercy Hospital. While nearly every office contains a coil, this mutual apparatus was purchased in order that patients at the hospital need not be moved when an x-ray photograph is necessary.

RUDOLPH J. E. ODEN, Secretary.

WAYNE COUNTY MEDICAL SOCIETY

The regular meeting of the surgical section of the Wayne County Medical Society was held Monday evening, February 17. The chairman, Dr. F. B. Walker, presided. Dr. Ray Andries, secretary. Dr. A. W. Blain read the paper of the evening on "When Shall We Operate for Goiter?" The importance of the thyroid in maintaining the metabolism has been proved beyond question. The mortality of the simple goiter operation has dropped steadily from 40 per cent. to less than 1 per cent. In the region of the Great Lakes, goiter is very common. In the past, operation was only attempted in the last extremity. The patients used to be told that a skin disease and failing mind would follow operation.

From the standpoint of treatment, goiter cases can be classified as first cases, which recover without treatment; second cases, which recover with medical treatment; third cases, which are surgical after medical treatment has failed, and fourth cases, which are purely surgical.

Often swellings of the thyroid occur in young girls, and at the time of pregnancy. Many of these get well of themselves. The location of the growth in the gland makes more difference as to symptoms than the size. Slight enlargements may give distressing symptoms, while very large tumors may give little discomfort. The diagnosis is usually not difficult, as the thyroid is quite accessible to examination. Medical treatment of tumor masses in the thyroid is quite useless.

The term of exophthalmic goiter is a misleading term for hyperthyroidism, as there may be no exophthalmus and may have no goiter. These cases may be treated medically, but this should not be continued too long. If after a month or few weeks of proper medical treatment the patient is still progressing downward, surgical treatment should be considered. In the earlier and milder cases the superior artery and vein may be ligated. The upper pole of the gland may be ligated. Sometimes each side must be ligated at separate intervals. In the intermediate cases, a lobe may be removed. If the patient is cured after a long continuance of the disease, he is often left a chronic invalid.

Properly executed operation for simple goiter is practically without danger. Surgery of the goiter is much less dangerous to the patient than the disease. Most patients can be cured of the disease and the remainder permanently benefited.

Dr. Spitzley opened the discussion. The subject is one of very great importance. The question of how surgical a disease this is, is not entirely settled. Most cases must, however, depend on surgery for a permanent cure. When the large simple goiter acts mechanical from its size, it is essentially a surgical complaint. It is not at all certain that the symptoms of hyperthyroidism are due to an oversecretion of the thyroid. It may be that the thyroid secretion is perverted rather than simply increased. Every case of thyroid enlargement other than the physiological enlargements of young girls or of pregnancy are surgical. Kocher holds

that all four poles of the glands should be ligated when any operation is required. This may be used as a preliminary operation in cases who are so bad as to forbid the more extensive and severe operation of thyroid extirpation. The ligation cures many of the cases in which it is employed. Many a patient with a large gland is suffering from a hypothyroidism and may need thyroid extract.

Dr. Morse reported parenchymatous and fatty degeneration of heart muscles in cases autopsied. Very often thyroid tissue is found in bone, and the prognosis in these cases is bad. These patients die later from carcinoma of the thyroid.

Dr. S. E. Sanderson reported some of the Mayos' work on goiter. They lay emphasis on the fact that patients suffer as much shock from ligation as from extirpation. An *x*-ray can be taken to show what is back of the sternum.

Dr. Gunsolus reported a case of exophthalmic goiter who died very suddenly, probably from degeneration of the heart muscles. The fibroid thyroid is the most dangerous form.

Dr. R. L. Clark has found many obscure neurasthenics due to thyroid difficulty.

Dr. Hickey is very skeptical as to the value of the thymus shadow which Dr. Bowen claims to have demonstrated in adults. The thymus can be shown by *x*-rays in young children. The compression of the trachea can be demonstrated even in intrathoracic goiter.

Dr. Bell thinks the enlargement of the thyroid in pregnancy in usually physiological. He has seen two permanent cases of goiter develop from pregnancy, one of which was operated on.

Dr. Blain, in closing, said that carcinoma of the thyroid usually developed in glands which have previously been enlarged. The patients do not die from shock after operation, but from an increase of the toxin with which the system is already permeated. The soft goiter is really more dangerous than the fibrous kind. Infiltration anesthesia should not be used. Two per cent. novocain can be used, as is done by Beers.

Mr. Gilberg gave a demonstration of the Swedish system of medical gymnastics.

The regular meeting of the Wayne County Medical Society was held on February 24, with the president, Dr. T. W. Haass, in the chair. Dr. R. L. Clark, secretary.

Prof. Max Broedel read a paper on "Art in Medicine." The reason for the failure of many artists in medical drawing is that failures in other branches of art are thought to be good enough for medical illustration. The scientific inefficiency of the medical illustrator is due to ignorance of the things he draws. Medical illustration is interpretative. Certain things must be emphasized and other things must be suppressed. The medical illustrator must study anatomy and gross and microscopic pathology. The making of all medical drawing should be preceded by studies, both with the hand and eye. Even in microscopic drawing, it is of great advantage if the artist has seen and handled by the gross specimen drawn. The object to be drawn must be judiciously posed as to the source of light view, it can then be made plastic in the drawing. Any drawing loses the advantage of binocular vision. The selection of the view point should be carefully chosen.

The purpose of a good medical picture is to clear up a point which cannot be elucidated in the text. Pictures can be remembered when words are forgotten. Illustrations are also of use in research work, as these may lead to useful discoveries. Out of a hundred medical students about five have enough artistic power to have made good artists. These are usually good medical men.

At the Johns Hopkins two classes of students in art as applied to medicine are taught, one of medical students to learn something of art, and the other of artists to learn something of medicine. About twenty-five lantern slides were shown, illustrating the points brought out in the paper, what can be taught medical students and what can be brought out by various methods of medical illustrations.

Dr. T. S. Cullen, Baltimore, presented a paper on Diseases of the Umbilicus." Many lantern slides were shown, most of them from the literature. The number of children who used to die from umbilical infection was very great. A few cases still die from infection through this source, although this is often very hard to make out. In young children where there is ascites, you get a hernia at the umbilicus. In many cases of peritonitis in children there may be a rupture at the umbilicus and a large quantity of fluid escape and the patient may get well.

The commonest trouble at the umbilicus is umbilical concretions or cholestrotomata. These become infected and may lead to a fistula lasting for years. These need simply be removed and become cured with a simple lotion. Gall-stones may be discharged through the umbilicus. Carcinoma of the umbilicus is nearly always secondary. In the majority of cases, the primary growth is in the stomach. A smooth tumor of the umbilicus, not involving the skin, is usually a carcinoma secondary to malignant disease of stomach, intestine or gall-bladder.

Dr. Longyear moved a vote of thanks to Professor Broedel and Dr. Cullen, seconded. Carried.

It was moved, seconded and carried that Dr. Cullen and Professor Broedel be made honorary members of the society.

The following physicians were elected to active membership: Drs. R. R. Powell, George Reberdy, Nelson MacArthur, A. A. Hughes, Albert McMichael and Dale M. King.

Mr. Harvey S. Bower was elected to associate membership.

Drs. Welsley Taylor and Benj. D'Arcy were transferred from other county societies.

The regular meeting of the Wayne County Medical Society was held on March 3, with the vice-president, Dr. L. J. Hirschman, in the chair, Dr. R. L. Clark, secretary.

Dr. F. C. Warnshuis, the Secretary of the Michigan State Medical Society, read a paper on "The Surgical Treatment of Prolapsus of the Urinary Bladder in the Female, Describing a Hitherto Unpublished Surgical Procedure." Cystocele may be accompanied by prolapse of the uterus. These patients usually have made the rounds and been subjected to many and varied forms of treatment. Dr. Herrick, Grand Rapids, many years ago first did this operation. Dr. Warnshuis has done this thirty-six times and has had but one failure. Dr. Herrick has done it fifty-eight times without a single failure. The operation is done through the abdominal wall and the uterus has a fixation done. A number of these cases have borne children after the operation. There has been no mortality in these 104 cases.

Dr. W. J. DuBois, Grand Rapids, read a paper on "Surgery of the Prostate." The prostate is readily infected from the bladder, urethra or seminal vesicles.

The gland is enclosed in a firm capsule and located at the base of the bladder. The gland attains its full size about the twenty-fifth year and is a sexual gland. Sexual abuses not infrequently lead to an enlargement of the gland and this may be so extreme as to demand surgical intervention. The gland may have an acute infection associated with pain and high temperature. There may be a constriction of the urethra from this swelling and hence stoppage of the urine.

Masturbation and incomplete sexual excitement may, on frequent repetition, cause chronic hypertrophy. This is a condition of old age, coming on about 50 years of age. The mild prostatitis lasting for years may affect the glandular structures, the intestinal tissue or both. The bladder, through retention, becomes distended. This distention may spread up to the ureters and kidneys, threatening life itself. A full bladder may give no symptoms except a dribbling from overflow. The history of the patient is of great service and a careful examination will make the diagnosis clear. The gland can be well examined through the rectum with the gloved finger, aided by a sound in the urethra. The real test of diagnostic skill comes in the differentiation of simple hypertrophy from new growth of the prostate, whether malignant or not. If the growth is limited within the capsule, it may be very hard to diagnose. When the prostate is large enough to obstruct one of the chief sewers of the body, its removal should be considered. Belfield, in 1886, brought out the first removal of the prostate. We are now doing the removal in many cases with a very low mortality. Some surgeons are as firm advocates of the perineal as others are of the suprapubic route. The writer reported a mortality of 66⅔ per cent. by the perineal route and only one death in the last ten cases operated by the suprapubic route. The prostate is enucleated in its capsule by the finger introduced through the bladder and working against the other finger in the rectum. When the gland comes away whole, ejaculation ducts are torn away. The wound in the bladder is not closed but continuous draining left in the abdominal wound. Urine will not come out through the urethra for several days. Hemorrhage must be watched for and properly treated.

Dr. Metcalf opened the discussion on Dr. Warnshuis' paper. The method doesn't violate any anatomical principles and would doubtless accomplish the end aimed at. Dr. J. W. Vaughan opened the discussion on Dr. DuBois' paper. The subject is a very large one. The diagnosis between the hypertrophy of the prostate and malignancy of the prostate is very difficult. The nodular feel of the malignant growth is of diagnostic value. Cystoscopic examination is of great value, especially of those cases with an enlarged middle lobe, with a valve-like growth. Most men here prefer the suprapubic method. Dr. Vaughan uses two guy sutures in the bladder wall, between which the incision is made.

Dr. Brooks uses the suprapubic method and has almost no mortality. Gas and oxygen anesthesia can be used in these operations and help to save these cases. The patients are allowed a head-rest the day following and are allowed up on the next day. Often these cases are better operated on in a two-stage operation. These cases are not all irrigated after operation.

Dr. F. B. Walker held that what is to be gained by prostatic operation is drainage. No one method of operation should be made a routine procedure.

Dr. Carstens has found cases of cystocele vary so much as to forbid routine treatment. The vagina can often be narrowed and the perineum repaired to advantage.

Dr. Spitzley has seldom found much prolapse of the bladder without prolapse of the vagina. The repair of the vaginal tract is often sufficient to correct the difficulty. To add an abdominal operation to all such cases seems rather unnecessary. The two stage operations for cases with badly infected bladders is a great advantage. These cases often die from absorption of the infection through wounded surfaces. Continuous drainage through the urethra by means of a soft rubber catheter in the urethra will aid the healing of the suprapubic wound. The drainage through the anterior wound should be by a tube plus gauze to get capillary drainage. Spinal anesthesia can be used with advantage in these cases.

Dr. Warnshuis and Dr. DuBois closed the discussion.

The medical section of the Wayne County Medical Society held its regular meeting March 10. The chairman, Dr. Hugo Freund, presided; Dr. J. H. Dempster, secretary. The program consisted of a symposium on blood-pressure. Dr. W. J. Wilson, Jr., read a paper on the "Use of the Sphygmomanometer in General Practice."

Hales, in 1733, demonstrated the fact of blood-pressure. Poisenille, in 1828, invented the mercurial manometer in the form of a V-tube; Ludwig, in 1847, made the first kymographion, while it was as recent as 1896 that Riva Rocci and Hill devised the present form of instruments. My personal preference is the Mercer, a mercurial form of apparatus, as the other forms must frequently be tested by one of this type to insure accuracy. The method advocated was the auscultatory, in which after the proper adjustments have been made, the bowl of a stethoscope is placed over the brachial artery at the bend of the elbow, when the air is pumped into the armlet until with the pulsations of the artery no sound is perceived, which gives the systolic point; if now the air is gradually released, with each arterial pulsation, a sound is perceived until the diastolic point is reached, when it disappears. The period between the diastolic and systolic points is called the period of pulse-pressure, and should normally be about 45 mm. The normal limits are: systolic, 110 to 135 mm.; diastolic, 60 to 90 mm. By hypertension or hyperpiesis we generally mean a pressure above 145 mm., by hypotension a systolic of 100 mm. or under. Some of the conditions causing it are nephritis, gout, arteriosclerosis, emphysema, plumbism, conditions of increased cranial pressure, convulsive states, angina pectoris and exophthalmic goiter. Hypotension is a constant feature in tuberculosis, in anemias especially pernicious, diphtheria, scarlet fever, measles, acute rheumatism and typhoid fever.

As a means of differential diagnosis in typhoid fever with hemorrhage we have hypotension, with perforation hypertension; in cerebral hemorrhage hypertension, with cerebral embolism a normal pressure; may be given as examples.

As a means of prognosis in shock following operation a blood-pressure returning to normal is a hopeful sign, while a constantly falling pressure has a dire portent.

The author believes the use of the sphygmomanometer should be as universal and frequent as the use of the thermometer.

Dr. T. A. McGraw, Jr., read a paper entitled "Hypo- and Hypertension; their Mechanism and Therapeutics." Pathologic increase and decrease in blood-pressure are symptoms of disease, not the disease itself. Hypotension depends on a disturbance in one or more of the four factors concerned in the maintenance of arterial tension: cardiac energy, peripheral resistance, the elasticity of the arterial wall and the volume of blood in the vessels. Hypotension is a constant factor in tuberculosis; it increases with the extension of the tuberculous process and diminishes with the arrest or progress of the disease; therefore prognosis can be based on it. In pneumonia, scarlet fever, typhoid, diphtheria and Addison's disease it is also found. The treatment of hypotension is the treatment of the disease in which it is found. In pneumonia it is often necessary to treat the hypotension direct and it is important to know if it is caused by vascular weakness alone or by cardiac failure in addition; if the latter, it is dangerous to give purely vasoconstrictor drugs, such as adrenalin. The pulse-pressure tells us: a high pulse-pressure points to vascular insufficiency, a low one to cardiac failure. The summary on hypertension was as follows:

1. It is a symptom not a disease; so treatment should be directed toward the disease in which it appears.

2. It is usually compensatory and it is better to reduce it indirectly than by direct dilatation of the arteries.

3. When it is necessary to lower tension directly, as in angina or in threatened apoplexy, the blood-pressure should be carefully controlled by frequent readings and should not be lowered beyond what may be considered normal limits for that particular disease, and, finally,

4. Indiscriminate prescribing of vasodilator drugs in every case of high tension regardless of indications is to be condemned.

DISCUSSION

Dr. George McKean agreed that hypertension and hypotension are symptoms and not diseases, therefore required no direct treatment. Hypertension was compensatory in the majority of cases. He thought not enough was made of high blood-pressure in obstetrics, inasmuch as high blood-pressure preceded the albumin. In pneumonias, after the first day or so the blood-pressure was lower. A case was cited of meningitis with low tension. Dr. McKean concluded that with the blood-pressure instrument at hand we should bleed more frequently. He felt that he had obtained good results from venesection.

Dr. James E. Davis presented a chart of blood-pressure readings on students between 20 and 35 years of age. The chart showed the pressure greater in the horizontal position.

Dr. W. M. Donald was impressed with the lack of uniformity in Dr. Davis' statistics, some showing fatalities with a low pressure, showing we could not judge the severity of the case by the high pressure. He thought it was not scientific nor good policy to practice medicine without a sphygmomanometer. The tactile sense was no sure guide to the actual blood-pressure. He concurred with the statement that hypertension was always compensatory and should be left severely alone.

Dr. R. E. Mercer thought we laid too much stress on systolic pressure and too little on circulation. He did not think by any means old cases of hypotension were compensatory. He thought in systolic cases potassium iodid was a good thing, but not where due to arteriosclerosis. Pulse-pressure was subject to great variation. Eighty pulse pressures per se were absolutely useless. The systolic pressure should be taken in connection with pulse-pressure. The systolic pressure was the main thing.

Dr. W. Welz spoke of blood-pressure in relation to pregnancy. Where high blood-pressure accompanied pregnancy it usually did not regain the normal until two or three weeks after delivery. He thought such condition in pregnancy in no sense compensatory but the result of toxemia. He thought the blood-pressure should be controlled during the crisis.

Dr. J. H. Carstens urged the use of the B. P. instrument in connection with pregnancy. He thought that the more blood-pressure taken the earlier the diagnosis. A high blood-pressure meant excess in eating or a little toxemia.

Dr. Delos Parker divided cases of high blood-pressure into two classes: (1) in which we had basic disease and (2) those in which disease was not very prominent. He felt that very little could be done in basic disease.

Dr. C. H. Hitchcock cited cases showing high blood-pressure in faulty living, especially in regard to diet and smoking.

Dr. Wilson and Dr. McGraw closed the discussion.

Correspondence

MT. CLEMENS, MICH., March 7, 1913.

To the Editor:—I am sending you a clipping from the local paper, dated yesterday, wherein the Business Men's Association has extended an invitation to Dr. Friedmann to come here and treat tubercular cases; claiming that they controlled the sanitariums and medical fraternity of Mt. Clemens.

I disclaim any knowledge whatever of the matter and a positive order is in this sanitarium to the effect that no consumptive cases will be received in the house and Dr. Friedmann's presence is undesirable if it would involve any possible chance for patients of this class to come in the house to see him.

If you will give this publicity through THE JOURNAL, it will be duly appreciated.

Yours very truly,

A. N. SHOTWELL, M.D.,
Superintendent "The Colonial."

[Comment.—The newspaper article referred to is a front-page article and contains a copy of three letters that have been sent to Dr. Friedmann by the Business Men's Association, the mayor and the health officer of Mt. Clemens. In the letter that was sent by the Business Men's Association we quote the following: "Mt. Clemens is in reality a great sanitarium. The whole business of the city is to heal the sick. . . . The whole city is at your disposal. . . . Our great sanitarium and hotel facilities . . . are absolutely at your disposal."]

County Secretaries' Department

THE success of the meetings of your society depends in a great measure on the secretary. You are not only expected to secure the essayists for your program, but also to so arrange your programs that they will appeal to the majority of your members, and by thus arousing their interest, insure their attendance at your scheduled meetings. The accomplishment of the foregoing duties will tax your energy and will necessitate more or less constant vigilance. It means work and I know of no way in which this important part of your duties can be accomplished through any other means than by persistently endeavoring to prepare your programs with a view of interesting the majority of your members. Your duties do not end with the arranging of your program.

There is nothing that casts such an air of chilliness over a meeting and serves so well to smother a spirit of interest or enthusiasm as the deathly stillness that ensues after the reading of a paper and the pause occurs without a discussor arising to enlarge on or emphasize the points of interest in the paper. Such an incident has spoiled many a good paper and meeting. A successful secretary is one who will have selected three or four members and secured their promise to open the discussion, thus breaking the ice and turning a paper that might have otherwise been a failure into one of exceeding interest and practical value. I know of one secretary who has three or four friends who are always able and willing to participate in the discussion of the subject under consideration whenever they receive the wink from the secretary. This society's meetings are of interest from the moment the meeting opens until adjournment takes place. The foregoing is advanced merely as a suggestion that may enable you to more successfully accomplish the work of your office.

DUES. As much as I dislike to be continually harping on this subject, it is incumbent on me to again remind the county secretaries that all dues for 1913 must be in my hands on or before April 10. Our House of Delegates passed a resolution directing the secretary to drop the names of all members who had not paid their dues on that date from our membership and JOURNAL mailing lists. I have also been directed to publish the names of the members who are in arrears in the May number of THE JOURNAL.

By being thus suspended a member will no longer receive the protection of the Medicolegal Committee and any action that may be brought against him for services rendered during this period of suspension will not be defended, even though he may later pay his dues and be reinstated in good standing. THE JOURNAL will also be discontinued during this period of suspension.

Will you not make the effort to inform all your members who have not paid their dues that it is absolutely essential that they be paid to you before April 1?

On or about April 5 you will receive a list of names of members of your society whose dues are shown as unpaid for 1913 by the records of this office. Kindly return this list promptly so that our copy may be verified before being sent to the printer on April 15.

THE request is again made for reports of the meetings that are held by your society. The publishing of these reports in THE JOURNAL will place your society meetings on permanent record and will be of interest, not only to your members, but also to the entire state. The reading of these reports by your brother secretaries may be the means of assisting them to introduce new and interesting features for their individual societies. Please send in these reports as promptly as possible after each one of your meetings.

DR. G. M. LIVINGSTON, by reason of his removal to Detroit, resigned as Vice-President of the County Secretaries Association. Dr. W. H. Sawyer has appointed Dr. D. W. Roos of Manistique, Secretary of the Schoolcraft County Medical Society, to serve the unexpired term.

THE Council of our Society has authorized the State Secretary to provide a dinner for all the county secretaries in attendance at the annual meeting of this Association. This meeting will be held in connection with the Flint meeting. The officers of the Association are preparing a suitable program. You are urged to plan to attend this meeting.

"All physicians claim to belong to the Medical Profession and enjoy its distinction and advantages. Not so as to organization. All enjoy its fruitage, but few are workers in the field of organization. The "Quack" and the "Charlatan" speaks vociferously of his relation to the profession, but hates organization like poison. Many good physicians never contribute a dollar or an effort towards organization, but as practitioners they are kept alive and protected by organization efforts of self-sacrificing men in the organization." —Selected.

Association News

MEMBERSHIP IN THE AMERICAN MEDICAL ASSOCIATION

The Proposed Change in Name

GEORGE H. SIMMONS, M.D., LL.D.
CHICAGO

[Explanatory Note:—This abstract of an address before the Conference of State Secretaries is republished from the American Medical Association *Bulletin* of Nov. 15, 1912, on the request of the Judicial Council. The House of Delegates referred the report of the Committee to Formulate Amendments to the Constitution and By-Laws to Extend Membership, presented at the 1912 session (*Journal A. M. A.*, June 15, 1912) to the Judicial Council with power to confer with constituent associations. The Council, after careful consideration, endorses the proposed change and takes this means of bringing the subject to the constituent associations as well as directing to it the attention of the members.]

I have been asked to discuss the present conditions of membership in the American Medical Association and the proposed change, which has been under discussion recently. While this is not directly related to the object of this conference, the discussion of uniform regulation of state membership, it is so closely connected with it that I cannot refuse to take advantage of the opportunity of discussing the question before such a large representation of state secretaries.

To get a clear understanding of what the present term "members" of the American Medical Association means, it is necessary to go back a little in the history of the Association.

The American Medical Association always has been a delegated body; only "delegates" ever had a right to take part in its proceedings.

"Permanent members" was a term originally applied to those delegates who connected themselves permanently with the Association after they had served as delegates. "Permanent members," however, had no rights except those of attending the meetings and taking part in the scientific work. In 1883, THE JOURNAL was started and the following year, for the purpose of increasing the circulation of THE JOURNAL, there was created another class: "Members by Application." A member of any so-called affiliated society could become a "member by application" simply by making application for membership and paying the annual dues. The difference between "members by application" and "permanent members" was that the latter had been delegates, whereas the former became members simply by making application. Neither "permanent members" nor "members by application" had vote or voice in business meetings.

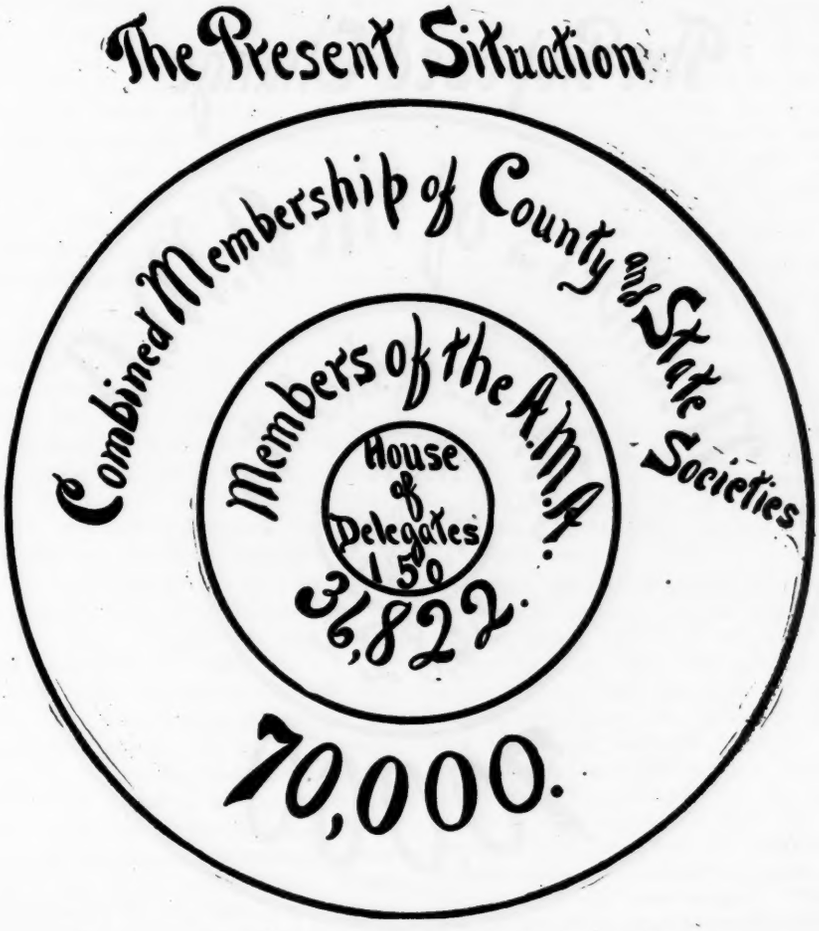


Chart 1

MEMBERSHIP IN THE A. M. A. TO-DAY ON THE SAME BASIS AS THE FORMER "MEMBERS BY APPLICATION"

Briefly, we have the following situation:

1. The voting membership of the organization is the combined membership of all the 2,000 (more or less) component county societies, amounting approximately to 70,000 members. These elect the delegates to the House of Delegates of the state associations; they in turn elect the delegates who form the House of Dele-

gates of the American Medical Association. Before 1901 the delegates to the American Medical Association were elected, or appointed, by the "affiliated" societies, which included local, district and state societies. Since 1901, that is, since the reorganization, the delegates to the national body are elected not by local, district and state societies, but by the state societies alone.

2. The so-called "members of the American Medical Association" are the direct successors of the old "members by application." By their payment of dues and their subscriptions to THE JOURNAL, they were and are to-day the supporting or contributing group of the members of the organization.

3. The House of Delegates is composed of approximately 150 members, who are elected by the various state Houses of Delegates, which are in turn composed of delegates elected by the members of the component county societies. The House of Delegates of the American Medical Association, therefore, is created by, and represents the combined membership of all the county societies of all the states; it is not elected by, nor does it represent, the present "members of the American Medical Association" as such; it never has.

The result is that we have two classes which could be called members. First, the actual, logical memberships of 70,000, usually designated as "the membership of the organization." Second, the 36,822 contributing or supporting members, who are designated as "members," although these "members of the American Medical Association" have no more privileges than have all members of the organization, except the right to take part in section work. This present situation I have had shown on the accompanying chart (Chart 1). The membership of the American Medical Association, at present 36,822, is an inner circle of the membership of county societies, while the House of Delegates is a still smaller circle composed of those who have been elected to represent the members of the organization of the whole country.

Now the situation itself is perfectly logical and is in every way to be commended. The trouble is that we have not named our groups accurately. Those whom we now call "members of the American Medical Association" are really those members of the organization who, in addition to supporting their county and state associations, also contribute to the support of the American Medical Association, while for the actual membership of 70,000 members we have no distinctive name.

Chart 2

The change that has been proposed is not a change in condition at all. It is simply a change in name. It is proposed to designate the 70,000 members included in the large outer circle (Chart 2) as "members of the American Medical Association," which they really are and always have been, while those included in the inner circle (that is, those members in good standing of their county and state societies, who also pay $5 a year to support the work of the American Medical Association) are to be called "fellows of the American Medical Association" instead of "members." This will make no change in the membership standing or rela-

tions of any man. If this suggestion is adopted, all members in good standing in their state organizations will be designated as "members of the American Medical Association," while those members who contribute $5 a year to support the work of the Association will be designated as "fellows of the American Medical Association." In other words, those who are now known as "members" of the American Medical Association will be known as "fellows" of the American Medical Association, while the term "members" will be applied to the entire, combined membership of the component county societies of the whole country.

This plan has several advantages. In the first place it will give us a name for the entire membership of the organization, which we have never had before. Before 1901 they were referred to as members of "affiliated" societies, and since then they have been called, for lack of a distinctive name, "members of the organization." Another advantage will be that it will make clear that the voting power lies with the 70,000 members and not with the 36,822 "fellows." When this plan was first proposed, some got the impression that the intention was to compel the 70,000 members of the county societies to become "supporting members" of the American Medical Association, as the term is now understood. This, of course, would be a ridiculous proposition. The proposed change contemplates leaving membership conditions exactly as they are; it contemplates changing the name, and not the relation.

One great disadvantage prior to the reorganization of the American Medical Association in 1901 was the fact that we had no name by which to designate the delegates. As soon as the name "House of Delegates" was adopted, then the function of the delegates became clear at once. The Association also has labored under the disadvantage, ever since its reorganization, that there has been no name by which to designate the actual voting membership, because the term "members" had been applied to the supporting body. The proposed change simply recognizes this fact, designating as "members" those who really are members, and designating the supporting members as "fellows."

I have already given some reasons for making the change, but there is another and more important; in fact, it is the paramount reason. Up to the present time, the members of the organization have not realized that they are, in reality, members of the American Medical Association. They regard the American Medical Association as something entirely apart from them, something in which they have no interest. These members of the organization are through their elected representatives responsible for what the American Medical Association is doing, or what it ought to do and is not doing, but they do not realize this, hence they are not interested. They do not appreciate that the House of Delegates of the American Medical Association, which they elect, is the body that is doing the work through the officers, trustees, councils, etc., which they, through their representatives in the House of Delegates of the American Medical Association, select. While only a change in name, I think the subject is of the utmost importance. I hope that all of you will look into it carefully, so as to understand exactly what is intended, and then will explain it to your members at the first opportunity.

Book Notices

THE SOUL AND SEX IN EDUCATION, MORALS, RELIGION AND ADOLESCENCE. Scientific Psychology for Parents and Teachers; with a chapter on Love, Marriage, Celibacy and Divorce, by Jirah D. Buck, M.D., Cincinnati: Stewart & Kidd Co., 1912.

This book is too inane to deserve a review. It is from first to last a tirade on religion and religious training. It cannot see that anytning good ever came out of Rome.

MEDICAL MEN AND THE LAW. A Modern Treatise on the Legal Rights, Duties and Liabilities of Physicians and Surgeons. By Hugh Emmett Culbertson, Esq., member of the Ohio and New York Bars; Contributing Editor to many Legal Publications. Octavo, 325 pages. Cloth, $3.00, net. Lea & Febiger, Publishers, Philadelphia and New York, 1913.

The duties, rights and liabilities of the professional man toward the public as settled by the law are largely unknown by the vast majority of medical men. The whole field of the relations of the medical practitioner, whether regular or irregular to the public, as bearing on professional standing, financial matters, collections, malpractice, libel and every other conceivable phase of the matter is treated in this unique volume. The book is written by a lawyer, not a medical man, and hence the viewpoint seems at times a little incongruous to the medical man, but we fail to find much that we can take exceptions to, but rather, very much that we can heartily commend. The cost of the information contained in the book would be prohibitive if obtained in the school of experience, and even at that would lack the classification herein presented.

SURGICAL CLINICS OF JOHN B. MURPHY, M.D., at Mercy Hospital, Chicago. Volume II. Number 1 (February, 1913). Octavo of 179 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1913. Published Bi-Monthly. Price per year: Paper, $8.00; Cloth, $12.00.

The first number of the second volume of these valuable and interesting clinical reports is indicative of the good things that are in store for the reader during the coming year. The value of this number is increased by an address and operation by Mr. W. Arbuthnot Lane of London on the Open Treatment of Fractures. This issue also contains an address on Medicolegal Relations of the Physician and Patient by Dr. W. C. Woodward. The remainder of the work is devoted to Dr. Murphy's clinics and contains the report of the diagnosis and operation in laminectomy, hour-glass stomach, cerebral adhesions, acute appendicitis and cases of joint and bone surgery. The comments of Dr. Murphy are alone worth the cost of the volume and in addition one receives a clinical report of the treatment of each patient. After reading the volume there is but one regret and that is that two months must elapse before the receipt of the succeeding number.

GOLDEN RULES IN GYNECOLOGY. Aphorisms, Observations and Precepts on the Proper Diagnosis and Treatment of Diseases of Women. By George B. Norberg, M.D., Professor of Diseases of Women and Gynecology, University Medical College; Gynecologist Kansas City General Hospital; Fellow and ex-President Kansas City Academy of Medicine. 253 pages, octavo. C. V. Mosby Company, St. Louis.

This number of the Golden Rule Series is of merit and value. It has a distinct field of usefulness. The

purpose of the volume is to give its readers those methods in gynecologic diagnosis and treatment, the observance of which is known to produce the best results. Chapters are devoted to: General consideration in Diagnosis and Treatment; Diseases of the Vulva; Diseases of the Vagina; Diseases of the Uterus; Diseases of the Tubes and Ovaries; Menstruation and Its Disorders; Diseases of the Urethra; and Diseases of the Bladder.

The literature in gynecology has been fully covered and what the author deems as the best method of procedure in various conditions have been incorporated in this volume. He has observed a constant effort to make short, emphatic and convincing statements which are of practical value.

AN ATLAS ON DIFFERENTIAL DIAGNOSIS OF THE NERVOUS SYSTEM. Analytical, Semeiological and Neurological Charts, by Henry Hun, M.D., Professor of Diseases of the Nervous System in Albany Medical College; Member of the Association of American Physicians; the American Neurological Association, etc., Author of "A Guide for American Medical Students in Europe," "Syllabus of a Course of Lectures on Diseases of the Nervous System," etc. The Southworth Company, Publishers, Troy, N. Y., 1913.

Let no one get the idea that this book is a treatise on the Nervous System, or on the Diseases of the Nervous System—it is nothing of the kind. It is just what its title claims it to be—a Differential Diagnosis of the Diseases of the Nervous System. It makes the diagnosis so plain, so clear, so simple, that aided by it, and following the simple system so lucidly explained, there is no reason why any intelligent physician competent to practice his art, and capable of interpreting and eliciting symptoms should have any difficulty of an unsurmountable nature in arriving at accurate diagnoses, even in seemingly obscure cases. Further, the plan is so comprehensive, accurate, simple and interesting as to substitute in the mind of the student or practitioner a fascination for this branch of work, in place of the dislike and aversion so prevalent in the professional mind to-day. When the teachings of this book are once seen and understood, the handling of nervous diseases will cease to be the bugbear it has formerly been.

ORGANIC AND FUNCTIONAL NERVOUS DISEASES. A textbook of neurology by M. Allen Starr, M.D., Ph.D., LL.D., Sc.D.; Professor of Neurology, College of Physicians and Surgeons, Medical Department, Columbia University, New York; Consulting Neurologist to the Presbyterian Hospital and the St. Mary's Free Hospital for Children, New York. Ex-President American Neurological Association and of the New York Neurological Society; Corresponding Member of the Societe De Neurologie, and of the society De Psychiatrie De Paris; of the Neurological Section of the Royal Society of Medicine, London, and of the Gesellschaft Deutscher Nervenarzte; Author of "Familiar Forms of Nervous Diseases" and "Atlas of Nerve Cells." Fourth Edition. Thoroughly revised; 969 pages, with 323 engravings and 30 plates in colors. Lea & Febiger, New York and Philadelphia.

The author and publishers offer this thoroughly revised fourth edition of this standard work to the profession. The aspects of neurology, the method of examination of the patient and the principles of diagnosis have been brought together in the first part of the book. The various symptoms of nervous affections are well described and analyzed. The practical anatomy and physiological function of the nervous system are concisely set forth.

The second part which treats of the organic nervous diseases has been added to by the additions that have been made in recent years to our knowledge in regard to poliomyelitis, brain tumors, pellagra and syphilis.

In the third part the functional diseases are fully presented and the space allotted to this department of the work has been doubled. Chapters have also been added on headaches, and on disorders of sleep.

The fourth part covers the diseases of the sympathetic nervous system and chapters added on symmetrical gangrene and angioneurotic edema. Trophic symptoms occurring in nervous diseases are also presented.

While the extensive literature of neurology has been well and carefully sifted by the author and references are given on important articles, the author has utilized his personal observations and experience in the presentation of each subject.

As nervous diseases lie on the borderline between medicine and surgery and in consideration of the brilliant achievements that have recently been made in surgical treatment of certain nervous diseases, the author has caused this work to assume an additional value by his consideration of the surgical measures employed in the treatment and cure of these nervous affections.

This work is commended to the student and the practitioner as a guide in the recognition and treatment of nervous diseases.

THE PRINCIPLES AND PRACTICE OF OBSTETRICS. By Joseph B. De Lee, A.M., M.D., Professor of Obstetrics at the Northwestern University Medical School. Large Octavo of 1060 pages, with 913 illustrations, 150 of them in colors. Philadelphia and London: W. B. Saunders Company, 1913. Cloth, $8.00, net; Half Morocco, $9.50.

This valuable work has the charm of originality and freshness totally lacking in so many books. The illustrations, and this book is profusely illustrated, are mostly photographic, but few of the old stereotype cuts used in common by many authors, are found in this work. The text is clear, readable and to the point. A feature is the large number of suggestions, in notes and descriptive text, giving methods and means of treatment, and common sense handling of the numerous ailments and affections of the pregnant or lying-in woman. More good hints are encountered in this book than are usually found in such works.

To Pelvimetry is devoted a chapter replete with illustrations and descriptive methods.

In normal labor, the advance of the head, the dilatation of the perineum, the delivery of the shoulders, control of the uterine contractions, etc., are beautifully illustrated and described, as is also the third stage, or delivery of placenta. Eclampsia and extra-uterine pregnancy receive excellent consideration, in fact all complications, placenta praevia, twins, neoplasms, diseases of ovum and fetal envelopes, monsters, etc., are illustrated from actual cases and beautifully described in the text. Much attention is given to labor in cases of contracted pelves. The consideration of lacerations and their immediate repair is closely followed by that of postpartum hemorrhage, every step for the control of which is shown by illuminating drawings.

Syncope and sudden death, accident to the child, with illustrations of methods of combating asphyxia neonatorum follows.

But it is by his handling of puerpereal infections that the author has shown that despite all our efforts, infection does sometimes occur. Illustrations of the streptococci and other germs in the tissue, clearly shows this. His treatment is rational, being neither

radical nor conservative. Part 3. Operative Obstetrics, embraces all conditions from simple application of forceps to the most complicated cesarean section, with illustrations of technic and complete descriptive text.

The practicability of this book stands out on every page. The student or practitioner will find in it what he wants, either for academic or practical application.

New and Nonofficial Remedies

Since publication of New and Nonofficial Remedies, 1912, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Nonofficial Remedies": .

HEDIOSIT is the lactone or inner anhydride, $C_{17}H_{12}N_7$, of alpha-glucoheptonic acid, $CH_2OH.(CHOH)_5COOH$. It is an odorless powder having a sweet taste and is readily soluble in water. When given to diabetic patients hediosit is said not to increase the amount of glucose in the urine. It is claimed to have a food value equal to the same amount of glucose. It is said to be useful as a sweetener of the food for diabetic patients. Farbwerke-Hoechst Company, New York (*Jour. A. M. A.*, Feb. 15, 1913, p. 516).

ISATOPHAN is methoxy-atophan, 8-methoxy-2-phenyl-quinolin-4-carboxylic acid, $CH_3O.C_7H_4N.C_6H_5.COOH.8:2:4$. It is a powder insoluble in water, tasteless and has a slight odor. Its actions, uses and dosage are the same as for atophan. It is also sold in the form of Isatophan tablets, each containing 0.5 gm. isatophan. Schering & Glatz (*Jour. A. M. A.*, Feb. 15, 1913, p. 516).

MENINGOCOCCUS VACCINE contains in each Cc. about 1,000 million killed meningococci. G. H. Sherman, Detroit, Mich. (*Jour. A. M. A.*, March 1, 1913, p. 665).

STAPHYLOCOCCUS PYOGENES AUREUS VACCINE is marketed in two strengths: 1. Containing in each Cc. about 300 million Staphylococcus pyogenes aureus. 2. Containing in each Cc. about 600 million Staphylococcus pyogenes aureus. G. H. Sherman, Detroit, Mich. (*Jour. A. M. A.*, March 1, 1913, p. 665).

STAPHYLOCOCCUS PYOGENES ALBUS AND AUREUS VACCINE contains in one Cc. Staphylococcus pyogenes albus and aureus each 600 million. G. H. Sherman, Detroit, Mich. (*Jour. A. M. A.*, March 1, 1913, p. 665).

PUEUMOCOCCUS VACCINE is marketed in two forms: 1. Each Cc. contains about 40 million killed pneumococci. 2. Each Cc. contains about 100 million killed pneumococci. G. H. Sherman, Detroit, Mich. (*Jour. A. M. A.*, March 1, 1913, p. 665).

The Truth About Medicines

It is the purpose of this department to encourage honesty in medicines, to expose frauds and to promote rational therapeutics. It will present information regarding the composition, quality and value of medicaments, particularly as this is brought out in the reports of the Council on Pharmacy and Chemistry and of the Chemical Laboratory of the American Medical Association.

THE EMETIC ACTION OF DIGITALIS.—Having previously shown that the emetic action or "gastric disturbance" of digitalis is produced by action on the vomiting center in the medulla and a property of digitalis itself, Hatcher and Eggleston have now studied the relation of the toxic dose to the emetic dose in a large number of digitalis drugs and preparations. The results will require a revision of many statements generally accepted by medical authorities. They show that the claims made for the proprietary preparations as to freedom from "gastric" effect, i. e., emetic action, are entirely without foundation. The investigators conclude: We have no means at present of securing the cardiac actions of the digitalis bodies without subjecting the vomiting center to the influence of these agents at the same time, and there is no advantage in substituting one mode of administration, or one member of the group, for another, and the employment of opium to prevent the gastro-intestinal symptoms of the digitalis bodies in ordinary cases masks the appearance of toxic symptoms which should serve as a signal for the reduction of the dose. Our results certainly lend no support whatever to the claims made that digalen, digipuratum, digitalysatum or the fat-free tincture of digitalis is in any way less actively nauseant or emetic in proportion to its cardiac activity than any of the better known and less expensive galenical preparations of digitalis and strophanthus (*Jour. A. M. A.*, Feb. 15, 1913, p. 499).

MAIGNEN PULV.—The powder is advertised by J. P. Maignen, Philadelphia. It is said to be valuable for the treatment of a long list of diseases and for application in various ways to lesions of the skin and subcutaneous tissues and to the various mucous membranes of the body. The circular states that its germicidal power is 3.75 times as great as that of phenol. Examination in the A. M. A. Chemical Laboratory showed the powder to be apparently a mixture, consisting largely of calcium oxid or hydroxid and sodium carbonate, which on treatment with water results in a mixture containing calcium carbonate and sodium hydroxid. While it is known that strong solutions of alkalies are germicidal, it is also well known that such solutions cannot be used in concentrations which possess any activity. Further, when taken internally as recommended, the alkali will be neutralized by the hydrochloric acid of the stomach. The claims therefore are evidently absurd and not deserving of consideration (*Jour. A. M. A.*, Feb. 15, 1913, p. 537).

FORMALDEHYD DERMATITIS.—W. E. Morgan reports a severe dermatitis caused by the use of alcohol denatured with formaldehyd. So many members of the medical profession have been invalidated physically, incapacitated for professional work, deprived of livelihood and rendered nervous wrecks by this peculiarly subtle and all-pervading vaporous poison that it should be relegated, writes Dr. Morgan, to the uses of the undertaker and pathologist only and then used with extreme care. If used for fumigation, the room and all its contents should be thoroughly aired for at least forty-eight hours (*Jour. A. M. A.*, Feb. 22, 1913, p. 590).

DIORADIN AND DR. BERNHEIM.—Recently the Council on Pharmacy and Chemistry rejected Dioradin, largely because the claims of its chief promoter, Dr. Bernheim, were questioned. In an interesting lawsuit light has been thrown on the methods of the promoters of Dioradin. For four years Dr. Louis Dieupart was head physician of the dispensary for the tuberculous

established at Saint-Denis, at the head of which is Dr. Samuel Bernheim. Bernheim discharged Dieupart for refusal to use Dioradin. Dieupart protested, on the ground of the inefficacy of Dioradin. At the trial he testified that Dr. Bernheim received a commission on all Dioradin used at the Saint-Denis dispensary (*Jour. A. M. A.*, Feb. 22, 1913, p. 608).

"CLINICAL REPORTS."—The sheafs of uncritical "clinical reports" which exploiters of utterly worthless "ethical" proprietaries have furnished in support of the medicinal virtues of their nostrums show that the "after this, therefore because of this" style of reasoning is not confined to the laity in the judgment of medicines but is also applied by many physicians. Many doctors who, in standing up for their pet proprietary, take the attitude, so ably described by George Eliot, of those persons who are distrustful of scientific methods. They will grudgingly admit that while, as a general thing, two sides of a triangle are together greater than the third side, yet after all we must be careful, as it is easy to carry mathematical reasoning too far (*Jour. A. M. A.*, March 1, 1913, p. 674).

PA-PAY-ANS (BELL).—Bell & Co. (Inc.) are trying to boost a preparation of theirs, Pa-pay-ans (Bell), advertised to be a "sure-cure" for acute indigestion. This is a mixture consisting essentially of sodium bicarbonate, charcoal and ginger, sweetened with saccharin and flavored with oil of wintergreen. They publish testimonials from physicians—not giving the names—and when asked for names they replied: " . . . in fairness to the men who write us we must withhold their names. No one of any standing in the profession would allow us to publish his name. . . ." Bell & Co. are closely associated with the L. D. Johns Co., a pseudomedical concern that obtains its capital by selling stock to physicians who are not above going into that kind of business (*Jour. A. M. A.*, March 1, 1913, p. 682).

THE UNITED DOCTORS.—Advertising quacks constitute a menace almost equal to that of the "patent-medicine" fakers. By their unscrupulous methods and fake schemes people are led to patronize these quacks, to the detriment of their health. The "United Doctors" is an organization of this kind, practically owned and controlled by one man. Offices are established in large towns and are operated until the public is milked dry. Their scheme is to advertise a "wonderful" system of treatment by which they claim to cure any disease from eczema to paralysis. Newspapers should be censured for accepting advertising matter of this kind, for when the newspapers no longer carry such fakes, concerns like the "United Doctors" will be forced out of business (*Jour. A. M. A.*, March 1, 1913, p. 682).

THE FALLACY OF HYPOPHOSPHITES.—Hypophosphites have been recommended especially in pulmonary tuberculosis with the belief that the phosphorus was of special value in this disease, and that the hypophosphite was the best form in which to administer phosphorus. There is no evidence to show that hypophosphites are utilized by the system, but instead it appears that they are excreted unchanged. While thus the hypophosphites do not furnish phosphorus to the body it is possible that they might have some direct action of their own on the course of the disease, but the clinical evidence for this is very slight. Altogether the hypophosphites with their many unscientific combinations described in the Pharmacopoeia and the National Formulary could well be eliminated from our materia medica (*Jour. A. M. A.*, March 8, 1913, p. 747).

ANTIMERISTEM-SCHMIDT.—Antimeristem-Schmidt is a preparation claimed to be useful in the treatment of inoperable cancer and as a supplementary treatment after operation for cancer. The treatment is founded on a theory advanced by Dr. O. Schmidt that the cause of cancer is found in a fungus, *Mucor racemosus*, which, Schmidt at first asserted, carried a protozoon which he regarded as the real cause of the disease. The "serum" or rather the vaccine, is prepared from cultures from this fungus. While Schmidt claims that he has been able to produce cancer by means of the organism, scientific research has not verified his claims. Extensive clinical trials have shown the treatment to be without effect (*Jour. A. M. A.*, March 8, 1913, p. 766).

PERTUSSIN.—Pertussin is a proprietary whooping-cough remedy manufactured by the Kommandanten Apotheke, Berlin. A Physician's sample of this preparation sent out by Lehn & Fink bears a label on which appears the following: "100 parts Pertussin contains: 1-2 Ol. Thymi, et Thymol, 21 1-2 Ext. Thymi 'Taeschner,' 50 Saccharum, 2 Glycerinum, 6 1-4 Alcohol, 19¾ Aqua Destillata." Pertussin belongs to that class of vegetable preparations which, since they contain no distinctive principle, are difficult of analysis —particularly as concerns the "joker" in the formula, in this case "Ol. Thymi, et Thymol" and "Ext. Thymi 'Taeschner'"—hence there has been much dispute as to the composition of this nostrum. In general, it appears that whatever virtues it has are due to some preparation of common thyme (*Jour. A. M. A.*, March 8, 1913, p. 766).

PASADYNE.—According to the manufacturer Pasadyne is a tincture of passion-flower. Formerly this nostrum was sold under the title "Daniel's Concentrated Tincture of Passiflora Incarnata." While the manufacturer claims marvelous virtues for the preparation, passiflora (passion-flower) is now generally recognized as being of little if any value. The Council on Pharmacy and Chemistry has refused recognition both to the drug passion-flower and to the proprietary preparation of Daniel—the first because its value has not been established and the second, because of extravagant and unwarranted therapeutic claims (*Jour. A. M. A.*, March 8, 1913, p. 766).

BIOSOL.—H. Hille, once of Heidelberg, now of Oak Park, Ill., has reached the conclusion that mineral starvation is the cause of all diseases. He claims to have found a remedy and calls it Biosol. Biosol is an indescribable mixture of alcohol, carbohydrates, and various mineral bodies—ranging all the way from sodium, potassium, calcium and magnesium to silicon, copper, uranium and thorium. It is said to be a valuable food as well as medicine. A dose of this food might keep a rabbit alive for several hours, and a man who could stand the expense and escape death from delirium tremens might live on three quarts of the mixture per day. Fortunately human beings have little occasion to fear mineral starvation and may obviate whatever danger there may be by a drink of milk (*Jour. A. M. A.*, March 8, 1913, p. 767).